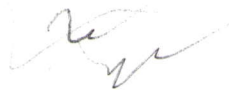


P O. Box 421  
Eureka, Utah 84628  
(801) 433-6804  
FAX (801) 433-6803



## North Lily Mining Company

March 20, 1992

State of Utah-Dept. of Natural Resources  
Division of Oil, Gas, and Mining  
355 West North Temple  
3 Triad Center, Suite 350  
Salt Lake City, Utah 84180-1203

RECEIVED

MAR 23 1992

DIVISION OF  
OIL GAS & MINING

Attention: Mr. D. Wayne Hedberg  
Permit Supervisor  
Minerals Regulatory Program

Subject: Permit Revision, Tintic Heap Leach Project, M/023/007,  
Juab County, Utah.

Dear Mr. Hedberg,

Pursuant to your letter of February 13, 1992 and our phone conversation on February 13, please find enclosed the revisions/amendments to our current amendment application.

The schedule in which North Lily Mining Company (NLMC) would prefer to screen and transport the screened product to our Silver City heap leach site is as follows:

Dump Name	County	1/4 Section	Township	Range
1) Eureka Hill	Juab	SE 13	T 10 S	R 3 W
2) Upper Mammoth	Juab	NW 30	T 10 S	R 2 W
3) North Star	Juab	SE 30	T 10 S	R 2 W
4) Unnamed	Juab	SE 30	T 10 S	R 2 W
5) Iron Blossom	Utah	NW 29	T 10 S	R 2 W
6) Colorado #1	Utah	SW 20	T 10 S	R 2 W
7) Colorado #2	Utah	SW 20	T 10 S	R 2 W
8) Eagle	Juab	SW 18	T 10 S	R 2 W

Each item where deficiencies were noted, in your letter of February 13, will be addressed in the same sequence.

## R647-4-101 Filing Requirement and Review Procedures - HWS

Refer to Attachment A - Form MR-REV - Notice of Intention to Revise Mining Operations.

*✓ ok HWS*

### R647-4-105.3 Maps, Drawings, Cross Sections-HWS

Please refer to Appendix B 1 through B 17 for plan, cross sections and post reclamation contour maps. (Note: The base or toe of each dump in this application revision has an assumed elevation of 0 feet and the past reclaimed contours may vary from what is demonstrated on the past reclamation maps).

The reclaimed slopes of each dump will conform as much as possible with the existing terrain and will aesthetically conform to the surroundings. The rejected material will be handled on a dump bases depending on how the material can best be spread or contoured to conform with existing terrain. In some cases minor amounts of top soil may be needed to be removed before screening and at the conclusion of the operation the rejected material can be spread and or contoured into the existing terrain and the topsoil spread over the top as a cover for the vegetation.

### \* R647-4-106.4 Operation Plan, Nature of Material - HWS/DWH

The dumps will be screened to a minus 1/2 inch thus the + 1/2 inch material will remain at the original dump site. The following table shows the estimate tons in each dump, the present and tonnage figures of what North Lily expects to be in the screened (- 1/2) material and the + 1/2 material to remain at the dump site: (Please note, that several of the dumps shown here will be entirely removed and any reject will be stockpile near one of the other dumps).

*d*

*which other dumps?*

Dump Name	Total/T	% -1/2	Screened/T <i>-1/2"</i>	TO REMAIN Reject/T <i>+1/2"</i>
Upper Eureka Hill	10,000	75	7,500	25% *2,500 <i>STOCKPILED WITH</i>
Eureka Hill RRG	12,500	70	9,500	24% 3,000 <i>←</i>
Upper Mammoth	24,000	63	15,500	37% 8,900
North Star	38,000	52	20,000	48% 18,000
EONS	2,500	60	1,500	40% 1,000
Iron Blossom #3	31,300	74	23,200	26% 8,100 <i>←</i>
Colorado #1 & 2	15,200	60	9,100	40% *6,100 <i>STOCKPILED WITH</i>
Eagle A	295,000	59	175,000	41% 120,000

The rejected material will range in size from + 1/2 inch to cobble size (6 to 8 inches).

*Z*

*⇒ UPPER EUREKA HILL AND  
COLORADO #1 & #2 DUMPS REMOVED*

- \* Upper Eureka Hill rejects to be stockpiled with Eureka Hill Railroad Grade rejects.
- \* Colorado # 1 & 2 rejects will be stockpiled with the Iron Blossom #3 rejects.

It should be noted that screen tests will be conducted on a regular basis while each dump is being removed. If economic grades can be recovered from coarser fractions of each dump then a coarser material will be hauled to North Lily's Silver City heap leach pads for leaching, thus reducing the amount of rejected coarse material left at each dump site.

The chemical characteristics of each dump will vary slightly, but basically will be:

Limestone/Dolomite (as host rock)  
 Copper  
 Sulfides in the form of lead, zinc pyrite etc.  
 Other ?

99%  
 >.25%  
 >.25%  
 >.50%

are these leachable?  
 sulfides  
 metals?  
 or what

The North Star Dump has approximately 25-30% shale/clay replacing the dolomite/limestone host rock.

✓ ok HWS

#### R647-4-106.5 Operation Plan, Soils Description -HWS

✓ ok HWS

It is not anticipated that any native soils will be disturbed. It is North Lily's intention to set up all operations on ground that has already been disturbed by or during previous operations and thus lessen the impact to the dump areas being disturbed. In case the soils are impacted, the following describes the soils in each area where dumps will be removed. (Note: The soils in the Tintic District have been identified and described in a report prepared by the United States Department of Agriculture and the Soil Conservation Service entitled Soil Survey of Fairfield - Nephi Area, Utah - Parts of Juab, Sanpete and Utah Counties).

The Eureka Hill and Mammoth Dump areas have soils that fall into the **PK - Pits - Dumps complex**. Identified and described as follows:

**"PK - Pits - Dumps complex** - This map unit consists mainly of mine pits and associated tailings dumps. Included in this unit are groups of settling ponds that have been used during and after mining operations and land that has been covered by material eroded from mine dumps.

Unless reclaimed, this unit generally produces very little vegetation and is severely limited for most uses."

The North Star, and Unnamed (EONS) Dumps have soils that are identified and described as:

**"LeF-Lundy-Rock outcrop complex, 30 to 70 percent slopes.** This map unit is on mountainsides and hillsides. Slopes are long and convex. In most areas the present vegetation is mainly grasses and shrubs. Elevation is 5,600 to 8,100 feet. The average annual precipitation is 14 to 18 inches, the mean annual air temperature is 41 to 45 degrees F, and the average freeze-free season is 70 to 110 days.

*about 60 percent = 35%*  
This unit is about 60 percent Lundy very cobbly loam, 30 to 70 percent slopes, and 20 percent Rock outcrop. The components of this unit are so intricately intermingled that it was not practical to map them separately at the scale used.

Included in this unit are about 5 percent Atepic shaly loam, 10 to 40 percent slopes: 5 percent Lizzant very cobbly loam, 8 to 30 percent slopes: and 5 percent Lodar very cobbly loam, 30 to 70 percent slopes, on hillsides Borvant cobbly loam 8 to 25 percent slopes on alluvial fans, also make up five percent of this unit. The percentage of these included soils varies from one area to another.

The Lundy soil is shallow and somewhat excessively drained. It formed in colluvium and residuum derived dominantly from limestone and sandstone. Typically, the surface layer is dark brown very cobbly loam about 6 inches thick. The underlying material is pale brown and brown very cobbly loam about 13 inches thick. Limestone is at a depth of 19 inches. Depth to limestone ranges from 10 to 20 inches.

Permeability of the Lundy soil is moderate. Available water capacity is about 1 inch to 2 inches. Water supplying capacity is 2 to 4 inches. Effective rooting depth is 10 to 20 inches. The organic matter content of the surface layer is 1 to 3 percent. Runoff is medium, and the hazard of water erosion is slight.

Rock outcrop consists of exposures of barren bedrock, mainly on escarpments and ridges.

This unit is used as rangeland and for wildlife habitat.

The potential plant community on the Lundy soil is about 65 percent perennial grasses, 3 percent forbs, 7 percent shrubs, and 25 percent trees. Important plant species are bluebunch

wheatgrass, Utah juniper, Indian ricegrass, and black sagebrush. The normal expected yield of total air-dried herbage is about 1,555 pounds per acre.

Because of the steepness of slopes and shallow depth to bedrock, grazing management practices are poorly suited to this unit.

This unit is poorly suited to recreational uses and homesite development. The main limitations are slope, stoniness, shallow depth of bedrock, and Rock outcrop.

The range site is Upland Shallow Loam (Juniper)."

The Iron Blossom #3 Dump has soils identified and described as Pk - Pits & Dumps described earlier with the Eureka Hill and Mammoth Dumps. The area below the Iron Blossom #3 Dump has soils described as:

**"AbF-Agassiz-Rock outcrop complex, 30 to 70 percent slopes.** This map unit is on mountain sides. Slopes are short to long and are convex. In most areas the present vegetation is mainly grasses and shrubs. Elevation is 6,000 to 8,500 feet. The average annual precipitation is 16 to 22 inches, the mean average air temperature is 41 to 45 degrees F, and the average freeze season is 70 to 110 days.

This unit is about 45 percent Agassiz very stony loam, 30 to 70 percent slopes, and 35 percent Rock outcrop. The components of this unit are so intricately intermingled that it was not practical to map them separately at the scale used.

Included in this unit are about 10 percent Lundy very cobbly loam, 30 to 70 percent slopes, on the lower part of south-facing slopes and 5 percent Flygare gravelly loam, 30 to 70 percent slopes on north facing slopes. The percentage of included soils varies from one area to another.

The Agassiz soil is shallow and somewhat excessively drained. It formed in residuum derived dominantly from limestone. Typically, the surface layer is brown very stony loam about 14 inches thick. The underlying material is yellowish brown extremely stony loam about 5 inches thick. Bedrock is at a depth of 19 inches. Depth to bedrock ranges from 10 to 20 inches.

Permeability of the Agassiz soil is moderate. Available water capacity is about 1 inch to 2 inches. Water supplying capacity is 3 to 7 inches. Effective rooting depth is 10 to 20 inches. The organic matter content of the surface layer is 1 to 3

percent. Runoff is medium, and the hazard of water erosion is slight.

Rock outcrop consists of exposures of barren bedrock, mainly on escarpments and ridges.

This unit is used as rangeland and for wildlife habitat.

The potential plant community on the Agassiz soil is about 45 percent perennial grasses, 10 percent forbs, and 45 percent shrubs. Important plant species are bluebunch wheatgrass, antelope bitterbrush, muttongrass, and mountain big sagebrush. Practices needed to maintain or improve the potential plant community include proper grazing use and a planned grazing system. The normal expected yield of total air-dried herbage is about 1,100 pounds per acre.

This unit is poorly suited to range seeding. The main limitations are slope and depth of rock. Steepness of slope limits access by livestock in the higher lying areas and results in overgrazing in the less sloping areas. Mechanical treatment is not practical because the surfaces is stony and the slopes are steep.

This unit is poorly suited to recreational uses and homesite development. The main limitations are steepness of slope, stoniness, shallow depth to bedrock, and Rock outcrop.

This map unit is in capability unit Vlls-M3, nonirrigated. The range site is Mountain Shallow Loam".

The entire Eagle Dump is contained within the PK-Pits and Dump complex, but if soils were to be disturbed in the area just below the dump they are identified and described as follows:

**"LdE-Loda Rock outcrop complex, 3 to 30 percent slopes.** This map unit is on hillsides. Slopes are long and convex. In most areas the present vegetation is mainly grasses and shrubs. Elevation is 4,800 to 6,400 feet. The average annual precipitation is 12 to 14 inches, the mean annual air temperature is 45 to 52 degrees F, and the average freeze-free season is 100 to 140 days.

This unit is about 60 percent Lodar very cobbly loam, 3 to 30 percent slopes, and 20 percent Rock outcrop. The components of this unit are so intricately intermingled that it was not practical to map them separately at the scale used.

Included in this unit are about 10 percent Lodar very cobbly loam, 30 to 70 percent slopes, on hillsides, and 5 percent Borvant cobbly loam, 8 to 25 percent slopes, and 5 percent Donnardo stony loam, 8 to 25 percent slopes, on alluvial fans. The percentage of the included soils varies from one area to another.

The Lodar soil is shallow and somewhat excessively drained. It formed in colluvium and residuum derived dominantly from limestone. Typically, the surface layer is grayish brown very cobbly loam about 10 inches thick. The underlying material is pale brown very stony loam about 5 inches thick. Limestone ranges from 10 to 20 inches.

Permeability of the Lodar soils moderate. Available water capacity is about 1 inch to 1.5 inches . Water supplying capacity is 2 to 4 inches. Effective rooting depth is 10 to 20 inches. The organic matter content of the surface layer is 2 to 5 percent. Runoff is medium, and the hazard of water erosion is slight.

Rock outcrop consists of exposures of barren bedrock, mainly on escarpments and ridges.

This unit is used as rangeland and for wildlife habitat.

The potential plant community on the Lodar soil is about 65 percent perennial grasses, 10 percent forbes, and 25 percent shrubs. Important plant species are bluebunch wheatgrass, black sagebrush, Nevada bluegrass, and Indian ricegrass. The normal expected yield of total air-dried herbage is about 650 pounds per acre.

Management practices needed to maintain or improve the vegetation include proper grazing use, proper seasonal use, good water distribution, and a planned grazing system. Dense stands of sagebrush may develop as a result of continuous overgrazing. Brush management by prescribed burning or by chemical treatment and proper grazing use can improve deteriorated range if at least 15 percent of the desirable plants still remain.

This unit is poorly suited to range seeding. The main limitation is depth to rock.

This unit is poorly suited to recreational uses and homesite development. The main limitations are slope stoniness, shallow depth to bedrock, and Rock outcrop.

This map unit is in capability unit Vlls-U3, nonirrigated. The range site is Upland Shallow loam".

**R647-4-106.6 Operation Plan, Plan for Protecting & Redistributed soils-HWS**

If native soils are impacted North Lily will remove the soils so they can be salvaged and used for later reclamation.

Concerning the impact that oversized waste rock has had on native soils in the area of the Centennial Dump where waste rock has been disposed of has been over ledges with very little soil covered. It would have been excessively costly and very dangerous to have attempted to salvage soils from that area.

— ok HWS

**R647-4-106.7 Operation Plan, Existing Vegetive Community-HWS**

✓ ok HWS

In most cases, only sparse plant communities are associated with the dump. The Pits-Dumps soil complex generally produces very little vegetation and where vegetation is present it is limited to small isolated communities of shrubs and sagebrush.

The areas adjacent to the dumps, vary somewhat but generally fall into the following categories:

- 1) Eureka Hill and Mammoth - the adjacent areas generally have sparse plant communities consisting of bluebunch wheatgrass, Indian ricegrass and black sagebrush.
- 2) North Star, Unnamed Dump, Colorado #1 and Colorado #2 - have plant communities that fall into the same types of communities mainly perennial grasses, forbes, shrubs, and some Utah Junipers.
- 3) Iron Blossom #3 Dump and adjacent area - has two different plant communities: one that encompasses the dump and areas right next to the dumps which consists mostly of small isolated communities of perennial grass, sagebrush and shrubs, two, the area below the Iron Blossom dump has bluebunch wheatgrass, antelope bitterbrush, muttongrass, and mountain big sagebrush.
- 4) The entire Eagle Dump - is contained within the Pits-Dump soil complex and has only isolated vegetation communities consisting of minor isolated shrubs and very sparsely scattered sagebrush. In the area below the Eagle Dump the most important plant species are bluebunch wheatgrass, black sagebrush, Nevada bluegrass, and Indian ricegrass.

what's this

*OK*

**R647-4-106.9 Operation Plan, Location & Site of Waste Stockpiles-AAG**

The final disposition of the waste (coarse rock) remaining on the dump sites will be handled on a dump by dump basis to be determined by how the material can best be spread or contoured into the existing terrain. In some cases minor amounts of top soil may need to be removed before screening and at the conclusion the rejected material can be spread and/or contoured into the slopes and the stockpile topsoil can be spread over the rejected material before seeding/vegetation.

In the cases of the Eureka Hill, Colorado #1 and #2 Dumps the entire dumps will be removed and no rejected material will be left. The rejected oversized rock will be handled with rejected materials from the Eureka Hill Railroad Grade and Iron Blossom #3 Dumps respectively.

*OK*

**R647-4-107.1.11 Operation Practices, Closing/Guarding of Shafts and Tunnels. - AAG**

Reprocessing of the proposed waste dump will not improve access to adits/shafts, whereby increasing the risk and/or hazards to the public health and safety. However, if adits/shafts are exposed during the removal of dumps, efforts will be made to seal the entrance either by using rejected material, and/or fencing in such a manner that access without effort would be prohibited.

To North Lily's knowledge all adits/shafts that are in the areas of the dumps that are proposed to be removed have been sealed by doors with locks and/or chain type fencing.

*OK*

**R647-107.1.12 Operation Practices, Disposal of Trash, Debris-AGG**

Any trash and debris that is encountered during the removal of the dump will be deposited in an appropriate location, such as an approved state, county, or city dump site.

*OK*

**R647-4-107.2 Operation Practices, Drainages-DWH**

In most cases the dumps that are proposed to be screened and removed are on slopes and will not have any impact on existing natural drainage systems.

The Eagle, Iron Blossom #3, North Star. and the Unnamed dumps are either in or close to drainage systems. The removal of these dumps

should not in any way impact and/or block or change the existing drainage systems.

Efforts can be made to reestablish drainage systems that the mine dumps may presently be impacting and/or blocking if reestablishing the drainage system will not adversely affect the surrounding area.

yes

AGREE  
aag

**R647-4-107.3 Operation Practices, Erosion & Sediment Control-DWH**

The same stratagem used to reclaim the Yankee and Mammoth dumps will be employed to maintain and control soil/sediment erosion at the dumps to be removed. This will include terracing/trenching, rock-check dams, small basins, berms, straw bales and etc., but may not be limited to the above described approaches. Other methods or a combination of several methods of soil control may be employed where appropriate.

The control of soil/sediment erosion will be paramount in the successful of planting seeds and the seeds taking hold.

**R647-4-107.6 Operation Practices, Concurrent Reclamation-HWS**

It is North Lily's intention that as soon as a dump has been removed to commence reclamation of the disturbed area. By so doing soil/sediments erosion can be held to a minimum, the reclamation will consist of trenching, terracing, construction of sediments basins, and etc. where appropriate.

Seeding of the disturbed areas will not commence until mid to late fall.

**R647-4-109.3 Impact Assessment, Existing Soils-HWS**

It is not anticipated that any soils adjacent to the dump will be disturbed or will be irreversibly impacted.

**R647-4-110.2 Reclamation Plan, Slope Stability-HWS**

The same slope stabilizing methods that have been used on the Yankee and Mammoth Dumps will be employed on the newly disturbed dumps. The reclaimed slope angles will be consistent with the existing/natural slope contours and will be as aesthetically pleasing as possible.

✓ ok HWS  
assume no slopes > 2h:1v 10

Three of the proposed dumps will be removed completely, they are the Eureka Hill, Colorado #1 and Colorado #2 Dumps.

Several methods for slopes that are equal to or greater than a 2H:IV would be terracing parallel to contours or a combination of several different methods. Each site will need to be considered on its own merits as to what will be the most feasible and aesthetically acceptable.

*R647-4-110.5 RECLAMATION PLAN, REVEGETATION PROGRAM - HWS*

The following seeding mixture was recommended by Mr. Holland Shepherd, the reclamation specialist for the Division of Oil, Gas, and Mining with an annual precipitation of approximately 14 inches, most of which falls in the late winter and early spring as rain or snow. Thus it is suggested that mid to late fall would be an appropriate planting time.

The basic seed mix for accessible areas, applied at a rate of 20 lbs. pure live seed per acre for drilled areas and double that rate for hand broadcasting. The mixture is described as follows:

Basic List Of Recommended Plant Species For  
Seeding At The Tintic Project Site

<u>Plant Species</u>	<u>Variety of Cultivar</u>	<u>Seeding Rate</u> lbs PLS/acre
Grasses:		
Agropyron cristatum ✓ (crested wheatgrass)	Fairway, Ephraim	5
Agropyron smithii ✓ western wheatgrass)		4
Oryzopsis hymenoides ✓ (indian ricegrass)	Paloma	2
Forbs:		
Medicago sativa ✓	Ladak	4
Shrubs:		
Atriplex canescens ✓ (fourwing saltbrush)		3
Purshia tridentata ✓ (bitterbrush)		2

The recommended seeding mixture for areas that are inassessable are shown below:

<u>Scientific Name</u>	<u>Common Name</u>	<u>SeedingRate lb/ac*</u>
Secale Cereal	Annual Rye	5
Agropyron elongatum	Tall Wheatgrass	3
Agropyron sativa	Western Wheatgrass	3
Medicago sativa (ladak)	Alfalfa	3
Melilotus officinalis	Yellow Sweetclover	3

\* This is a broadcast rate. After broadcasting, the seed should be raked into the ground so that the majority are covered with 1/4 - 1/2 inches of soil.

Mr. Shepherd also suggested using alfalfa mulch over sites that were drilled and had slopes of less than 3H:IV.

Other operation and reclamation practices will be employed where appropriate per Rules R613-002-107, 108, 109.

#### **R647-4-111.2 Reclamation Practices, Reclamation of Stream Channels.-AAG**

In most cases the dumps that will be screened and removed, are on slopes and will not have an impact on existing natural drainage systems.

The Eagle, Iron Blossom #3, North Star, and the Unnamed Dump are either in or close to drainage systems. The removal of these dumps should not in any way impact and/or block or change the existing drainage systems.

Efforts can be made to reestablish drainage systems that the mine dumps may presently be impacting and/or blocking if reestablishing the drainage system will not adversely affect the surrounding area.

The same reclamation procedure used in other areas (i.e. sloping to natural contours and etc.) will be employed in stream channel areas to aid in bringing the disturbed areas back as close as possible to its natural or pre mining condition.

#### **R647-4-111.11 Reclamation Practices-Structures and Equipment Disposal-AAG**

Any structures/equipment that is encountered during the removal of the dump will be disposed of in an appropriate location, such as an approved state, county, or city dump site.

**R647-4-112 Variance-HWS**

At some of the dump sites to be disturbed, topsoil may need to be removed and stock piled for redistribution upon completion of the dump removal. At other sites the coarse rejects may be sufficiently large to cause problems in seeding by not having enough soil or fines to allow the seeds to bed and take hold and grow. If this should become the case, North Lily would like to work with the Division of Oil, Gas, and Mining, Reclamation Specialist, on a site specific basis, in determining alternate methods of making the site as aesthetically acceptable as possible.

✓ ok  
HWS

**R647-4-113 Surety-HWS/AAG**

As built maps of several disturbed and reclaimed areas have been drafted and are enclosed to help in clarification and resolve any misunderstandings that have occurred.

As pointed out in your letter dated February 13, 1992 North Lily bonded for 2.6 acres in the borrow pit area. However, 6.5 acres were disturbed and have subsequently been reclaimed. The actual area disturbed was 525 feet by 540 feet square (see Appendix Map C-1) which is equivalent to 6.5 acres. This area has been reclaimed and seeded and has begun to recover from having been disturbed. Why there was or is a discrepancy in the acreage bonded on the actual acreage disturbed, I don't know, and have no defense other than North Lily has reclaimed and seeded the area disturbed.

The area known as the Gold Chain Dump was not originally disturbed by North Lily. Several other mining companies had conducted quite extensive sampling programs on the Gold Chain and Mammoth Dumps. When North Lily was doing the reclamation work on the Mammoth Dump they also reclaimed and seeded approximately 1 acre of ground on the Gold Chain even though it was not bonded or disturbed by North Lily. To my knowledge this was done as a favor to the Mammoth Mining Company.

The Mammoth Dump (i.e. Lower Mammoth) was bonded for 15.0 total acres, disturbed was 22.4 acres (see Appendix Map C-2). Again this area has been reclaimed, (i.e. terracing, trench, sediment basins, etc.) seeded, and mulched.

The Red Tailings area was bonded for 11.1 acres. The actual acres disturbed, reclaimed and seeded are 15.4 acres (see Appendix Map C-3)

The May Day/Yankee area that was bonded under E/023/038 is still inaccessible but the actual area disturbed and reclaimed will be mapped and reported to the Division of Oil, Gas and, Mining as soon as weather conditions allow access.

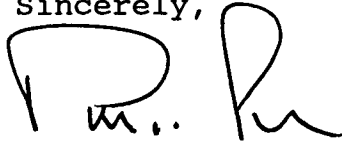
NOT BONDED, BUT SEPARATE  
BECAUSE IT WAS UNDER AN  
EXP-NOI. NOI SAID  $\leq 3$  ACRES

LENER SAID 2 ACRES & RECLAIMED

It is North Lily's opinion that by removing the above discribed dump and reclaiming, and seeding these previously disturbed areas, that the district and counties involved will be left more acceptable to the environmentally concerned.

Hopefully, all items of concern have been addressed completely, but if further information is needed, please call and North Lily will make every effort to comply with your request.

Sincerely,

A handwritten signature in dark ink, appearing to read "P.C. Spor". The signature is stylized with a large, looped "P" and a cursive "Spor".

Paul C. Spor  
General Manager

**ATTACHMENT A**

Form MR-REV  
Notice of Intention to  
Revise Mining Operation

**APPENDIX A**

I     General Information  
II    Maps and Drawings  
III   Project Description

# Attachment A

FORM MR-REV

(Revised 1/92)

## FOR DOGM USE ONLY:

File #:(M/S) M / 023 - 00(7)

Approved: (mm/dd/yy) / /

Bond Adjustment: (\$)

STATE OF UTAH  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

355 West North Temple  
3 Triad Center, Suite 350  
Salt Lake City, Utah 84180-1203

RECEIVED

MAR 23 1992

DIVISION OF  
OIL GAS & MINING

## NOTICE OF INTENTION TO REVISE MINING OPERATIONS

When an operator intends to revise a mining operation, a **Notice of Intention to Revise Mining Operations** shall be filed with the Division. The notice must include all information, concerning the revision, that would have been required if it had been included in the original Notice of Intention (NOI). Ideally, the revision application should be a "stand-alone" document and include all information necessary to conduct a complete review.

**"REVISION"** means a significant change to the approved Notice of Intention to Conduct Mining Operations, which will increase the amount of land affected or alter the location and type of onsite surface facilities such that the nature of the reclamation plan will differ substantially from the approved Notice of Intention. Revisions require public notice and may require approval by the Board of Oil, Gas & Mining, if a change to the amount and/or form of the reclamation surety is necessary.

**"AMENDMENT"** is an insignificant change to the approved Notice of Intention. An amendment requires Division approval, but does not require public notice.

The Division will determine whether a request for change is significant or insignificant on an individual case-by-case basis.

**PLEASE NOTE:** When applicable, reference to previously approved information contained in the original NOI can be used (identify volume #'s, section, page #, plate/map #'s, & date of submittal). If possible, please attach appropriate copies of the referenced material as part of the application for revision.

Where possible, please format the application to revise mining operations (e.g., text, maps, tables, figures, etc.) to allow direct insertion into the original NOI as replacement pages, or as a separate addendum to the approved NOI.

The operator is encouraged to use this form as a guide only. Please use extra sheets as necessary to complete each section that follows.

The following information must be included as part of the application to revise mining operations:

**I. GENERAL INFORMATION (Rule R647-4-104)**

1. Name of Operator/Applicant: North Lily Mining Co

2. Name of Company/Corporation: North Lily Mining Co

3. Address: P.O. Box 421  
Eureka, UT 84628

4. Phone: (801) 433 6804

5. Name of Mine/Project: Tintic Project

6. Previously Assigned File Number: (M) / S / 023 / 007  
\*from original Notice of Intention (NOI)

7. Location of Proposed Activities:

COUNTY Juab & Utah - See Appendix A

TOWNSHIP \_\_\_\_\_, RANGE \_\_\_\_\_,

SECTION(S) \_\_\_\_\_ (Identify to 1/4, 1/4 section)

8. Ownership of Land Surface:

Private (Fee) X Owners Name(s): See Appendix A  
(Private)

State of Utah \_\_\_\_\_ Public Domain (BLM) \_\_\_\_\_ National Forest (USFS) \_\_\_\_\_

9. Ownership of Minerals:

Private (Fee) ☒ Owners Names(s): See Appendix A  
(Private) \_\_\_\_\_

State of Utah \_\_\_\_\_ Public Domain (BLM) \_\_\_\_\_ National Forest (USFS) \_\_\_\_\_

10. Utah Mining Claim Number(s) N/A

11. Utah State Lease Numbers(s) N/A

II. **MAPS, DRAWINGS & PHOTOGRAPHS (Rule R647-4-105)**

Appropriate maps, drawings, plates, etc. should be provided that are pertinent to the revision, or amendment of mining operations. Please provide a revised map outlining the previously approved and the new proposed disturbed area boundaries. These materials should be prepared according to the requirements of Rule R647-4-105.

List map numbers or appendices used for this section: See Appendix B Maps

III. **OPERATION PLAN (Rule R647-4-106)**

Provide a narrative description, referencing any appropriate attached maps or drawings, of the pertinent details of the proposed change(s) in the operating plan. Specific details which are different from those described in the original approved NOI should be included. Identify additional proposed surface disturbance. Include the total number of acres to be affected by the revision or amendment. All appropriate information requirements as outlined under Rule R647-4-106 must be addressed in the application.

Refer to Permit Revision - Dated March 20, 1992

**IV. IMPACT ASSESSMENT (Rule R647-4-109)**

Please provide information as required under Rule R647-4-109 regarding projected potential surface and/or subsurface impacts which may be associated with the proposed change(s) in mining operations.

Refer to Permit Revision - Dated March 20, 1992

**V. RECLAMATION PLAN (Rule R647-4-110)**

Describe how you intend to stabilize the disturbed areas upon cessation of operations. This includes backfilling excavations, grading, sloping or contouring, permanent stabilization of slopes or roads, permanent closure of roads, removal of structures and improvements, etc. Provide cross section of the proposed final contour of the land after reclamation.

Please outline any proposed changes to the originally approved reclamation plan. Appropriate sections of Rule R647-4-110 must be addressed as they may apply to the proposed change(s) in mining operations.

Refer to Permit Revision - Dated March 20, 1992

## VI. VARIANCE (Rule R647-4-112)

Please identify any requests for variance from the requirements of rules R647-4-107, -108, or -111. A narrative justification must also be included for each variance request. A discussion of any alternate methods or other mitigating measures should be included, if applicable.

Refer to Permit Revision - Dated March - 20, 1992

## VII. SURETY (Rule 613-004-113)

### Reclamation Surety:

Indicate whether the proposed activities will change the amount of work required to reclaim the minesite. If significant changes will result, then an itemized reclamation cost estimate should be provided (and attached) with direct reference to the specifics of the proposed change(s). This information will be used to assist the Division in determining any reclamation surety adjustments required for the operation.

Refer to Permit Revision - Dated March 20, 1992

### VIII. SIGNATURE REQUIREMENT

The application for permit change must include a section similar to the following example:


I hereby certify that the foregoing is true and correct.



\_\_\_\_\_  
Signature of Authorized Officer/Representative:



\_\_\_\_\_  
Name (Typed or Print):



\_\_\_\_\_  
Title of Authorized Officer/Representative:

Date: March 20, 1992

## APPENDIX A

### I. GENERAL INFORMATION

#### 7. Project Location

County: Juab

Range	Dump Name	1/4 Section	Township	
A)	Eureka Hill Dump	S E 13	T 10 S	R 3 W
B)	Upper Mammoth Dump	N W 30	T 10 S	R 2 W
C)	North Star Dump	S E 30	T 10 S	R 2 W
D)	Unnamed Dump	S E 30	T 10 S	R 2 W
E)	Eagle Dump	S W 18	T 10 S	R 2 W

County: Utah

F)	Iron Blossom #3 Dump	N W 29	T 10 S	R 2 W
G)	Colorado #1 Dump	S W 20	T 10 S	R 2 W
H)	Colorado #2 Dump	S W 20	T 10 S	R 2 W

#### 8. Ownership of the land surface: Private - fee ground

- A) Eureka Hill Chief Consolidated Mining Company  
866 Second Avenue  
New York, New York 10017  
Attn: Mr. Leonard Weitz
- and
- Crown Resource and Centurion Mining  
1225 17th Street, Suite 1500  
Denver, Colorado 80202  
Attn: Mr. Christopher Herald
- B) Upper Mammoth Mammoth Mining Company  
2411 Crofton Lane, Suite 17 B  
Crofton, Maryland 24114  
Attn: Mr. Gregory Olsen
- C) North Star North Lily Mining Company  
1111 Bayhill Drive, Suite 210  
San Bruno, California 94066-0133  
Attn: Mr. Tom Crom

- D) Unnamed North Lily Mining Company  
1111 Bayhill Drive, Suite 210  
San Bruno, California 94066-0133  
Attn: Mr. Tom Crom
- E) Eagle Chief Consolidated Mining Company  
866 Second Avenue  
New York, New York 10017  
Attn: Mr. Leonard Weitz
- F) Iron Blossom #3 Sunshine Mining Company  
P.O. Box 250  
Eureka, Utah 84628  
Attn: Mr. Tim Hanafen
- G) Colorado #1 Sunshine Mining Company  
P.O. Box 250  
Eureka, Utah 84628  
Attn: Mr. Tim Hanafen
- H) Colorado #2 Sunshine Mining Company  
P.O. Box 250  
Eureka, Utah 84628  
Attn: Mr. Tim Hanafen

9) Owners of **minerals** within/on the land to be affected:

- A) Eureka Hill Chief Consolidated Mining Company  
866 Second Avenue  
New York, New York 10017  
Attn: Mr. Leonard Weitz  
  
and  
  
Crown Resource and Centurion Mining  
1225 17th Street, Suite 1500  
Denver, Colorado 80202  
Attn: Mr. Christopher Herald
- B) Upper Mammoth Mammoth Mining Company  
2411 Crofton Lane, Suite 17 B  
Crofton, Maryland 24114  
Attn: Mr. Gregory Olsen
- C) North Star North Lily Mining Company  
1111 Bayhill Drive, Suite 210  
San Bruno, California 94066-0133  
Attn: Mr. Tom Crom

- D)     Unnamed             North Lily Mining Company  
                               1111 Bayhill Drive, Suite 210  
                               San Bruno, California 94066-0133  
                               Attn: Mr. Tom Crom
  
- E)     Eagle               Chief Consolidated Mining Company  
                               866 Second Avenue  
                               New York, New York 10017  
                               Attn: Mr. Leonard Weitz
  
- F)     Iron Blossom       Sunshine Mining Company  
               #3             P.O. Box 250  
                               Eureka, Utah 84628  
                               Attn: Mr. Tim Hanafen
  
- G)     Colorado #1        Sunshine Mining Company  
                               P.O. Box 250  
                               Eureka, Utah 84628  
                               Attn: Mr. Tim Hanafen
  
- H)     Colorado #2        Sunshine Mining Company  
                               P.O. Box 250  
                               Eureka, Utah 84628  
                               Attn: Mr. Tim Hanafen

Eureka Hill

#### Utah Mining Claim Numbers

- A)     Eureka Hill             Eureka No. 39 and/or Card No. 175, Card No  
                                       388, portion of Bullion No. 76 and/or Card  
                                       No. 238, Legal No. 132, Montana No. 40  
                                       and/or Card No. 407, Three Ply No.95  
                                       and/or Card No. 550
  
- B)     Upper Mammoth        Harkness Lot 156 # 17770, First Northern  
                                       Ext. Mammoth 38 Jenkins 93
  
- C)     North Star            North Star 62 and West Star 235
  
- D)     Unnamed               North Star 62 and California 245
  
- E)     Eagle                 Eagle # 123,     No. Ext. Eagle 213 AM,  
                                       Blue Bell # 124, and No. Ext. Bluebell #  
                                       212 AM

- F) Iron Blossom #3 Lucile # 5471  
G) Colorado #1 Colorado # 4120  
H) Colorado #2 Butte # 4420, and Red Bird # 4422

## II MAPS AND DRAWINGS

Enclosed with this application is a map of the Eureka Quadrangle 7.5 minutes series. The area of exploration is marked. Access in and out for the test will use existing old roads. Disturbance will be too small to detect on map.

## III PROJECT DESCRIPTION

### 2. Identify the type or method of exploration proposed.

Cuts and trenches will be made in existing dump. Material will be screened and hauled to facility. There will be no work below ground surface.

### 3. Proposed Disturbance

The purpose of this project is to recover the economic values in existing dumps in the Tintic and East Tintic Mining Districts. A screening plant will be set up beside the dumps that will be evaluated. The over-size rejected from these tests will be left in place. This test will leave the over-size material deposited on an already existing dump which is not presently vegetated, thereby not causing any further disturbance. Any topsoil disturbed will be stockpiled for use in reclamation when test is complete.

The fines from these dumps will be hauled to the Silver City Plant. This material will be loaded on the existing heap and leached for economic value.

There will be no new roads constructed as the areas are laced with existing roads. Several sections of the existing roads will be modified and used for access to the dumps.

Upon completion, the area disturbed will be reclaimed as specified in the North Lily Tintic Operation Permit M/023/007.

The projected acreage to be disturbed:

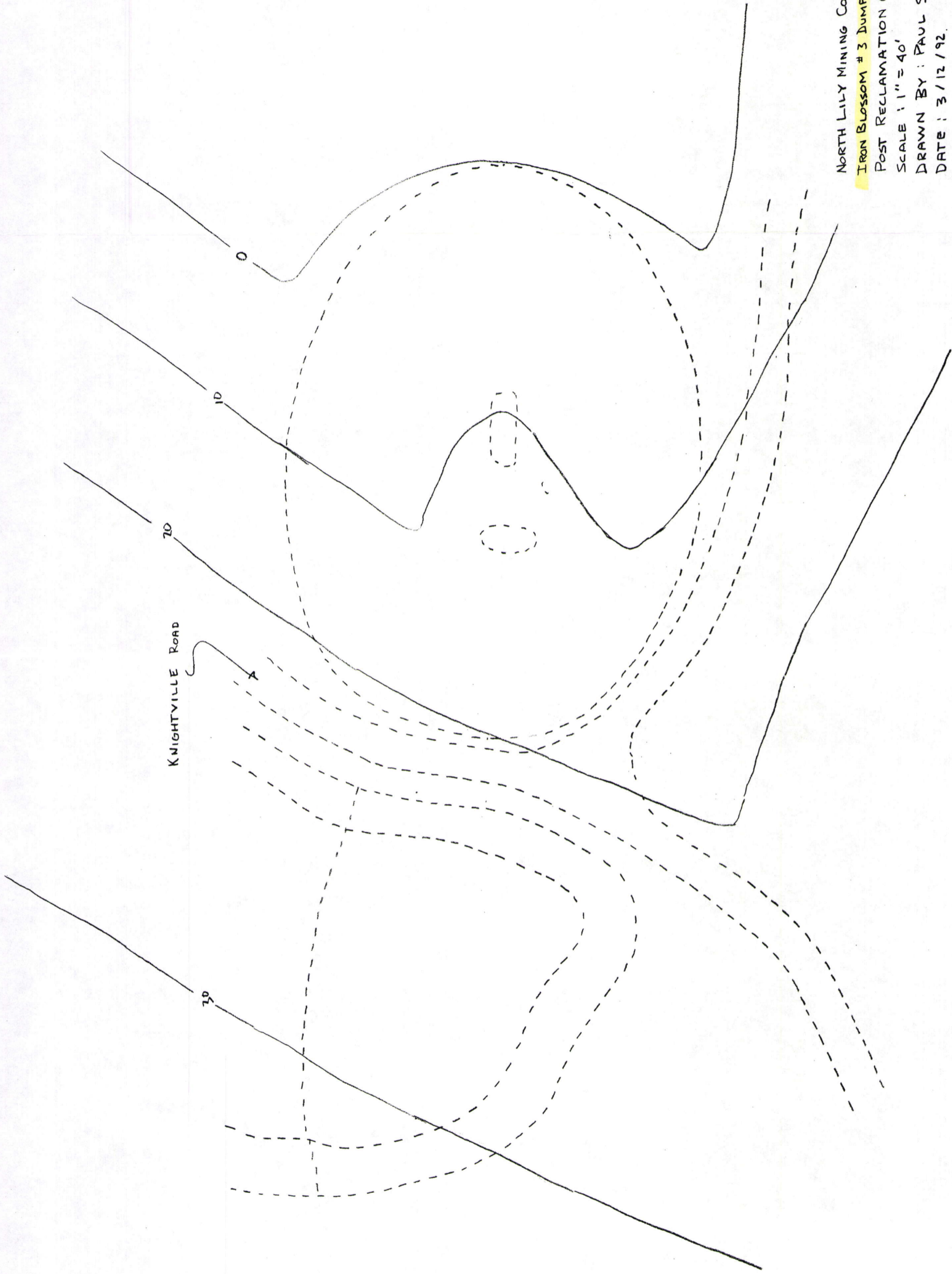
A)	Eureka Hill Dump	2.2	acres
B)	Upper Mammoth Dump	2.5	acres
C)	North Star Dump	1.3	acres
D)	Unnamed Dump	0.5	acres
E)	Eagle Dump	3.4	acres
F)	Iron Blossom #3 Dump	1.2	acres
G)	Colorado #1 Dump	0.8	acres
H)	Colorado #2 Dump	0.9	acres

12.8

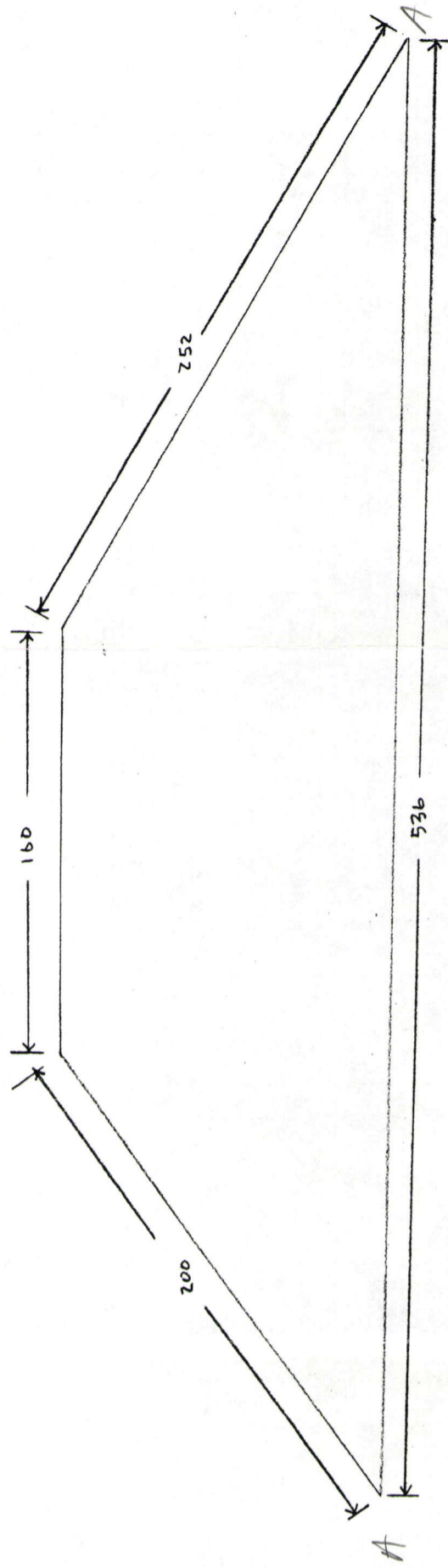
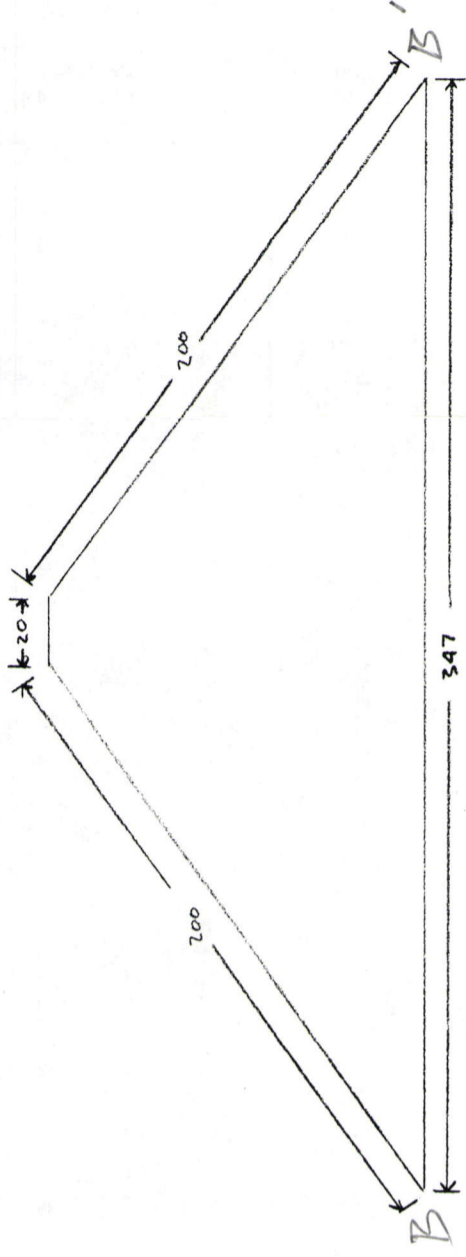
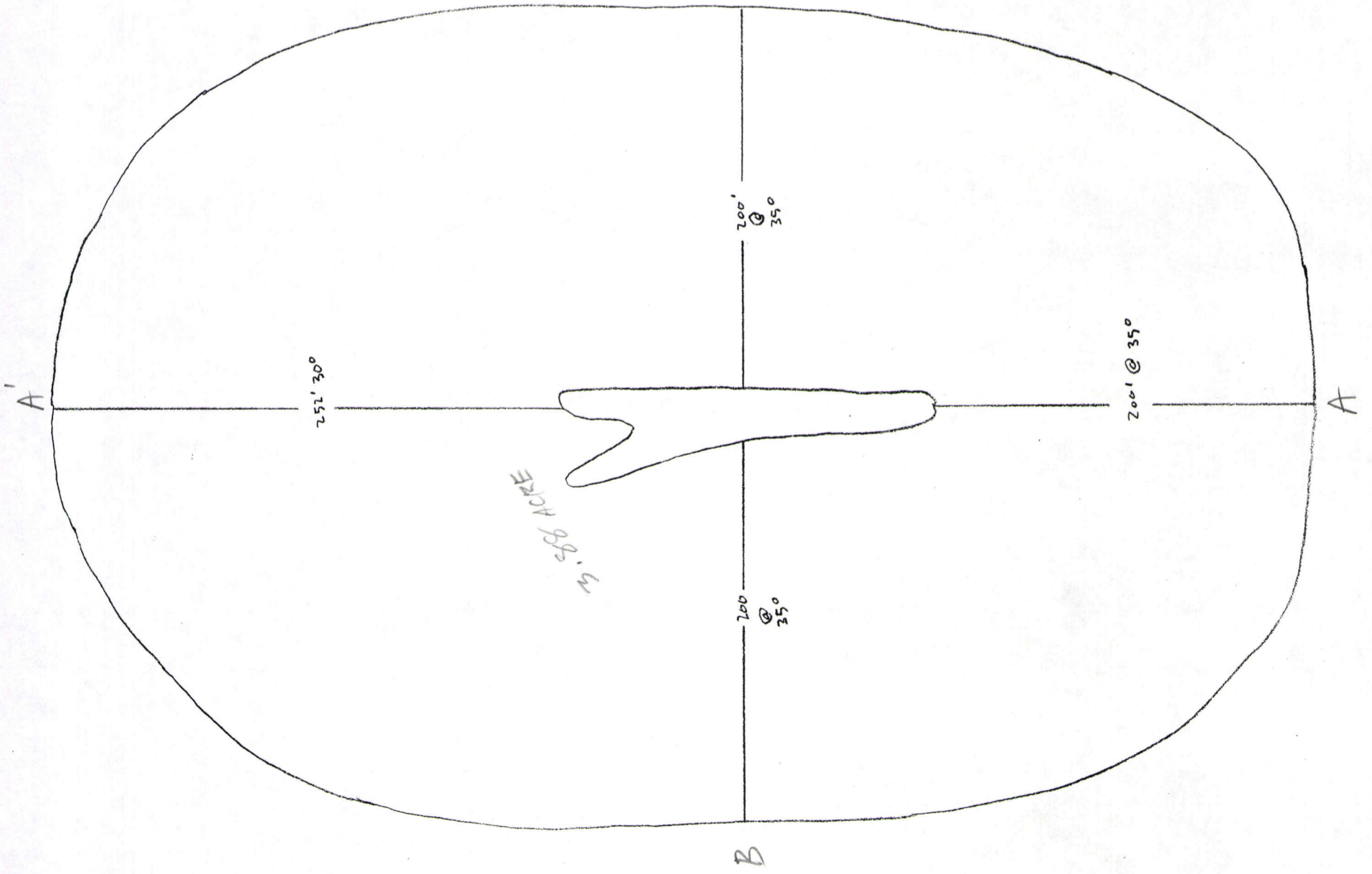
WHERE / WHAT IS THE  
EUREKA HILL RR GRADE?

<b>APPENDIX B</b>	<b>INDEX OF MAPS</b>
<b>APPENDIX B-1</b>	Upper Eureka Hill Dump Plan and Cross Sections
<b>APPENDIX B-2</b>	Upper Eureka Hill Dump Post Reclamation Contour
<b>APPENDIX B-3</b>	Eureka Hill Railroad Grade Plan and Cross Sections
<b>APPENDIX B-4</b>	Upper Mammoth Dump Plan and Cross Sections
<b>APPENDIX B-5</b>	Upper Mammoth Dump Post Reclamation Contour
<b>APPENDIX B-6</b>	North Star Plan and Cross Sections
<b>APPENDIX B-7</b>	North Star Post Reclamation Contour
<b>APPENDIX B-8</b>	EONS Dump Plan and Cross Section
<b>APPENDIX B-9</b>	EONS Dump Post Reclamation Contour
<b>APPENDIX B-10</b>	Iron Blossom #3 Dump Plan and Cross Section
<b>APPENDIX B-11</b>	Iron Blossom #3 Dump Post Reclamation Contour
<b>APPENDIX B-12</b>	Colorado #1 Dump Plan and Cross Section
<b>APPENDIX B-13</b>	Colorado #1 Dump Post Reclamation Dump
<b>APPENDIX B-14</b>	Colorado #2 Dump Plan and Cross Section
<b>APPENDIX B-15</b>	Colorado #2 Dump Post Reclamation Contour
<b>APPENDIX B-16</b>	Eagle Dump Plan and Cross Section
<b>APPENDIX B-17</b>	Eagle Dump Post Reclamation Contour

— oh, no post-reclamation  
— YES. W41? - 000



NORTH LILY MINING COMPANY  
IRON BLOSSOM # 3 DUMP  
POST RECLAMATION CONTOUR MAP  
SCALE : 1" = 40'  
DRAWN BY : PAUL SPOR  
DATE : 3/13/92  
1.2 ACRE



NORTH LILY MINING COMPANY

EAGLE DUMP

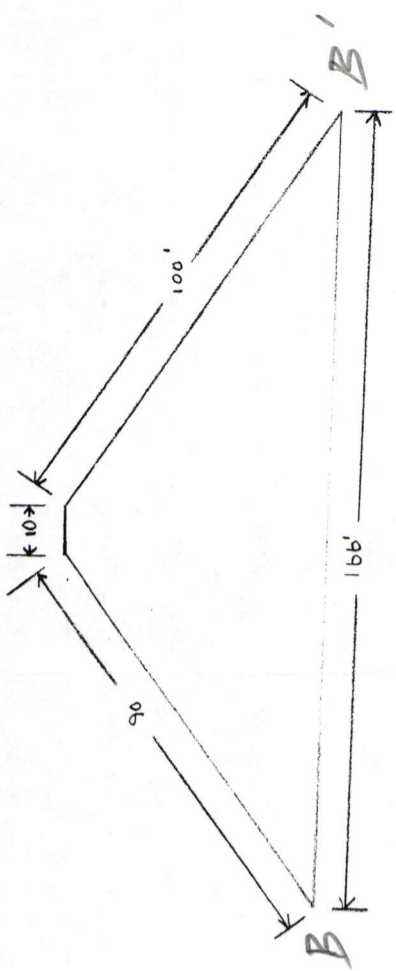
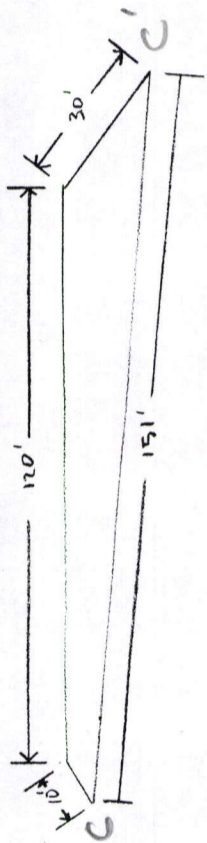
SCALE: 1" = 60'

DRAWN BY: PAUL SPOR

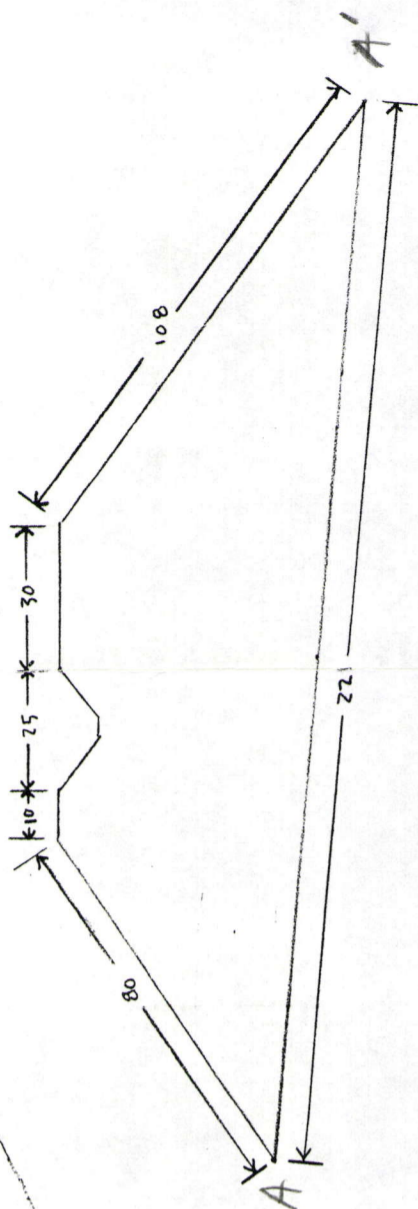
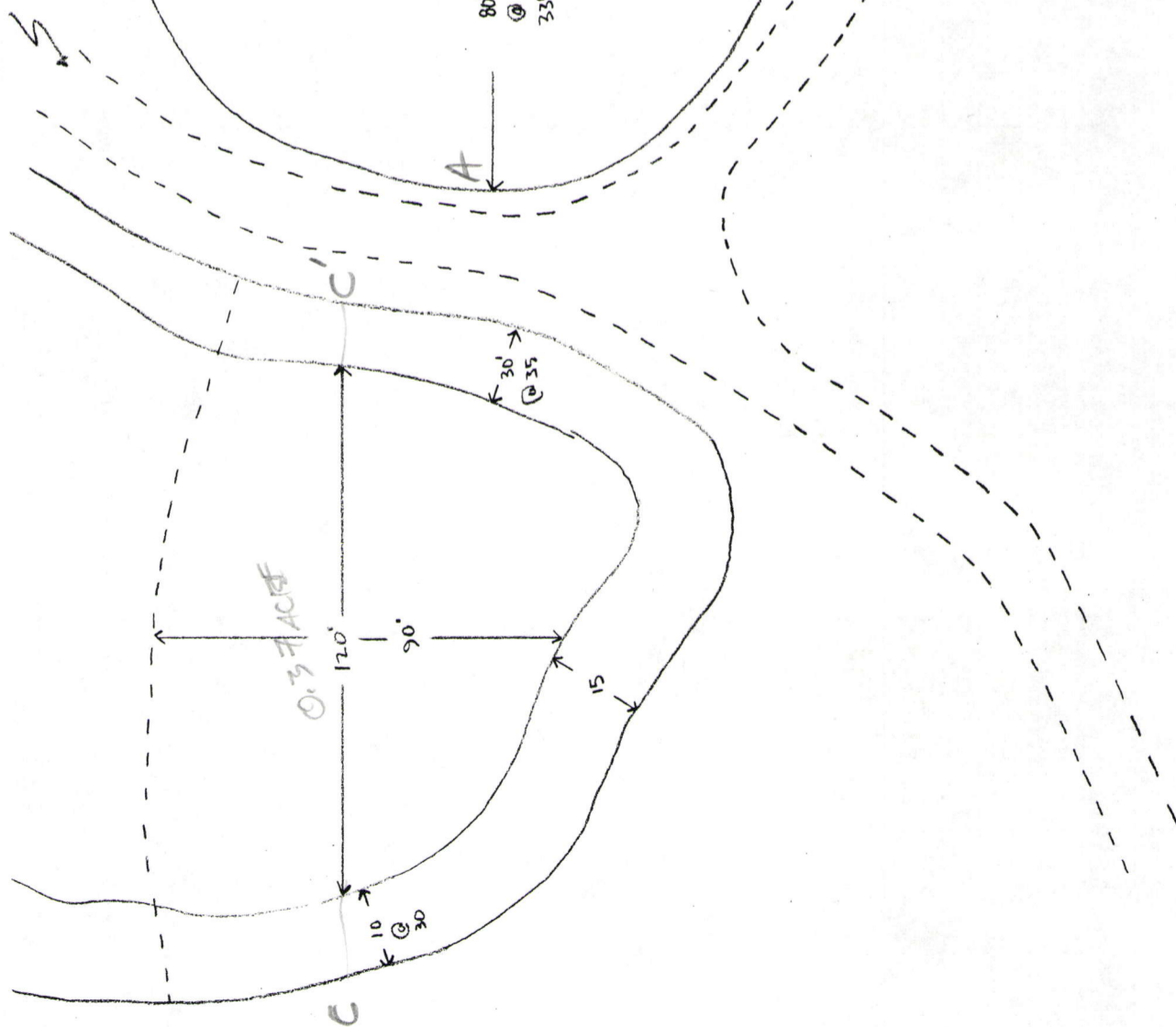
DATE: 3/11/92

3.4 ACRES

APPENDIX MAP B-16



KNIGHTVILLE ROAD



NORTH LILY MINING COMPANY

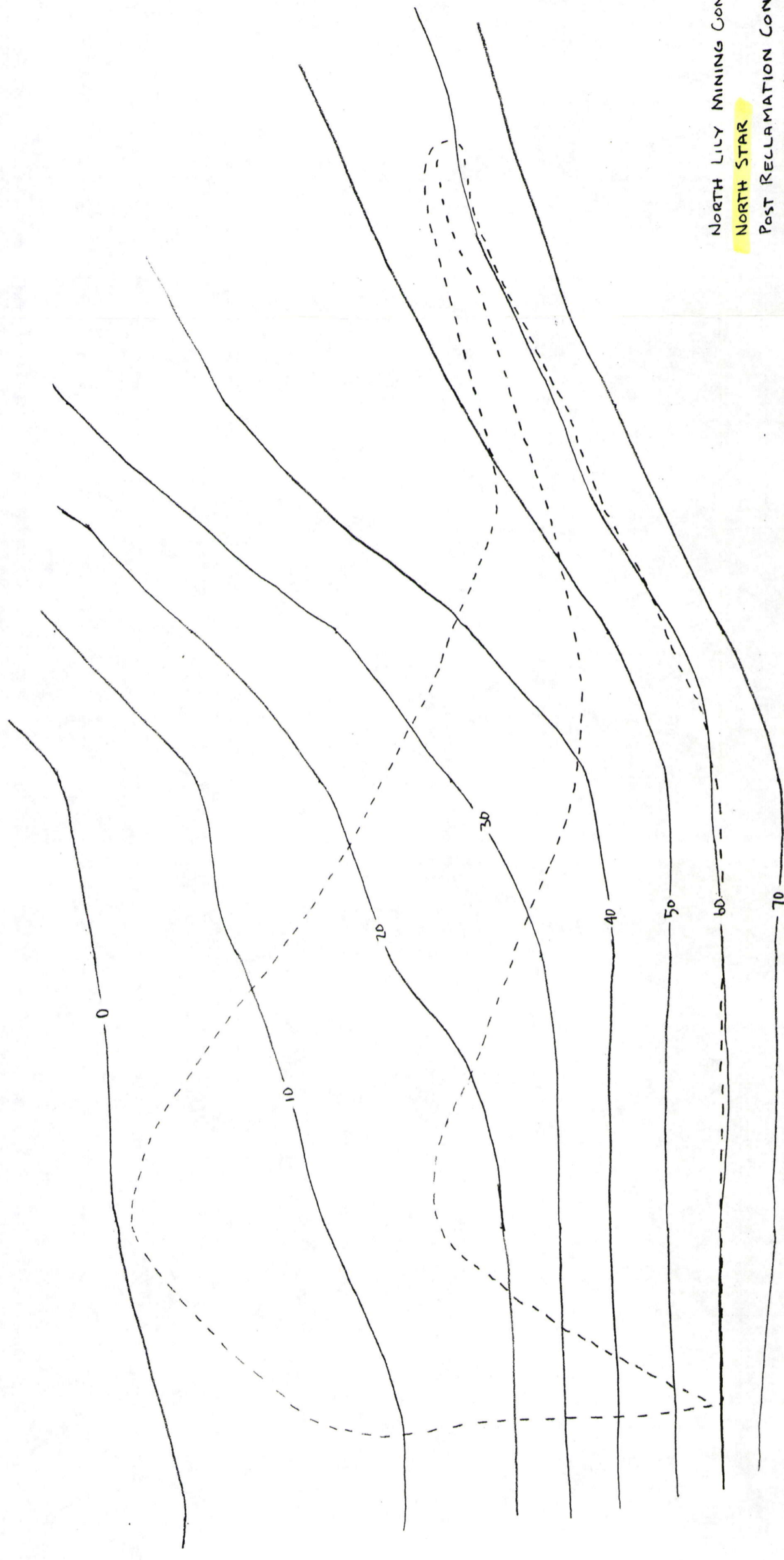
IRON BLOSSOM # 3 DUMP

SCALE: 1" = 40'

DRAWN BY: PAUL SPOR

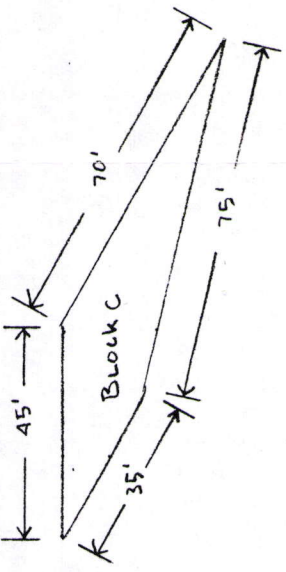
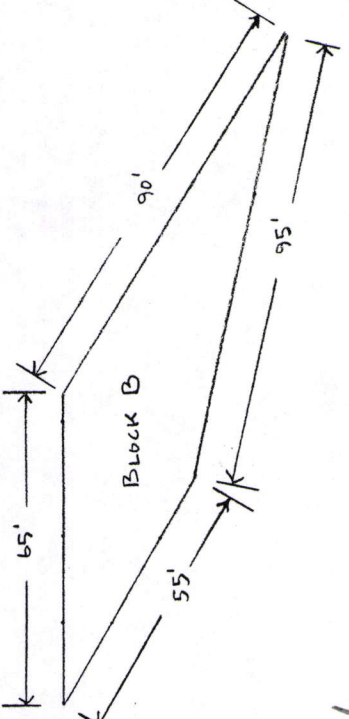
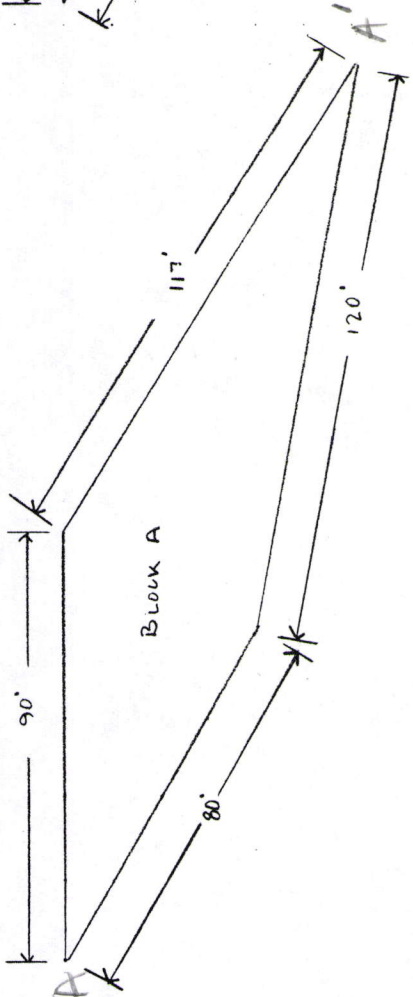
DATE: 3/12/92

1.2 ACRE

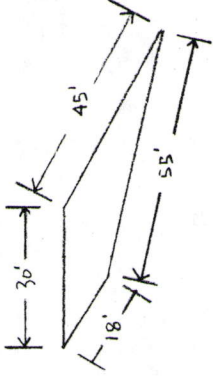


NORTH LILY MINING COMPANY  
NORTH STAR  
POST RECLAMATION CONTOUR  
SCALE: 1" = 40'  
DRAWN BY: PAUL SPOR  
DATE: 3/10/92

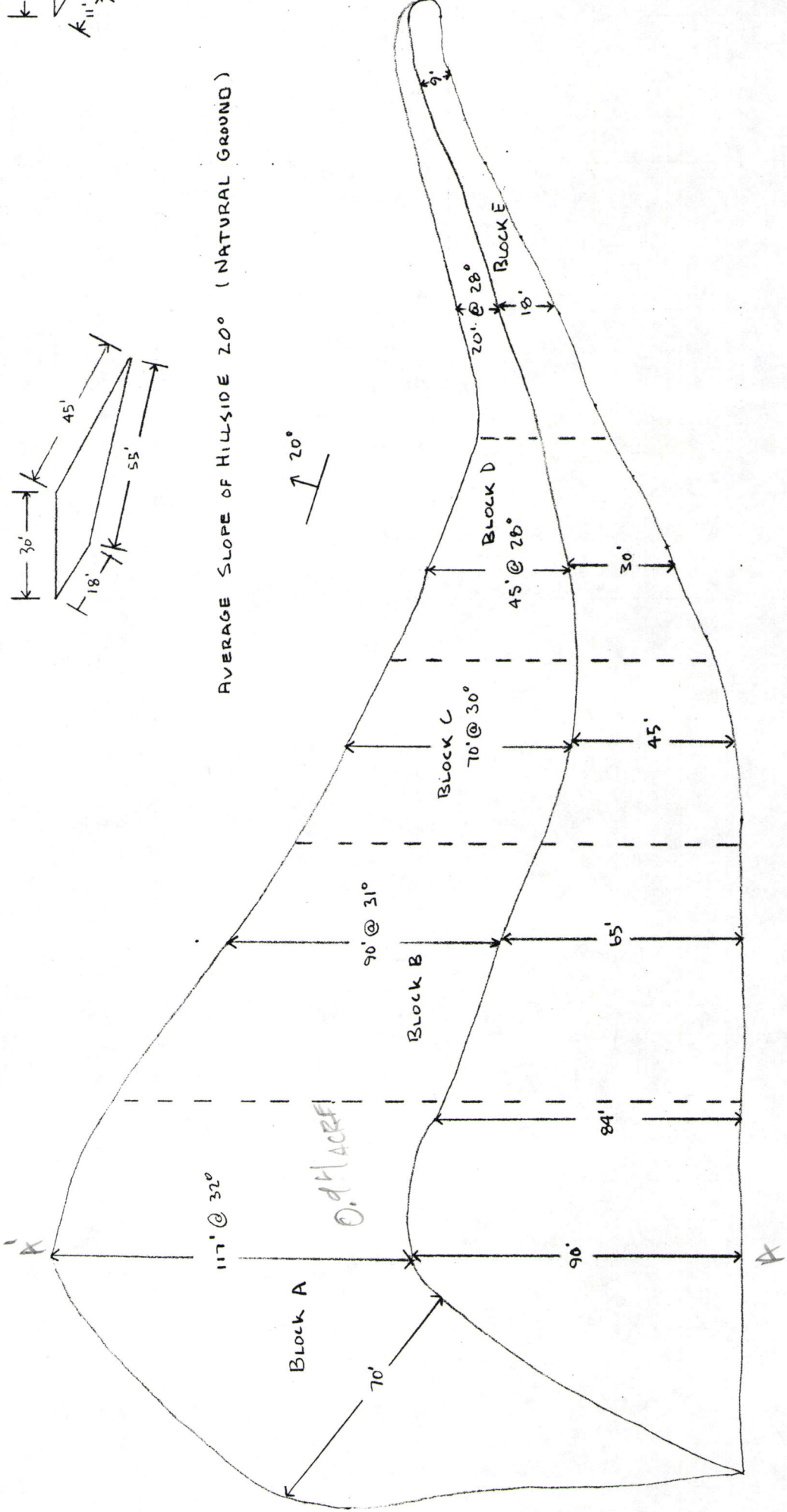
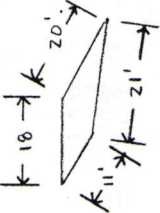
1.3 Acre



Block D



Block E



NORTH LILY MINING COMPANY

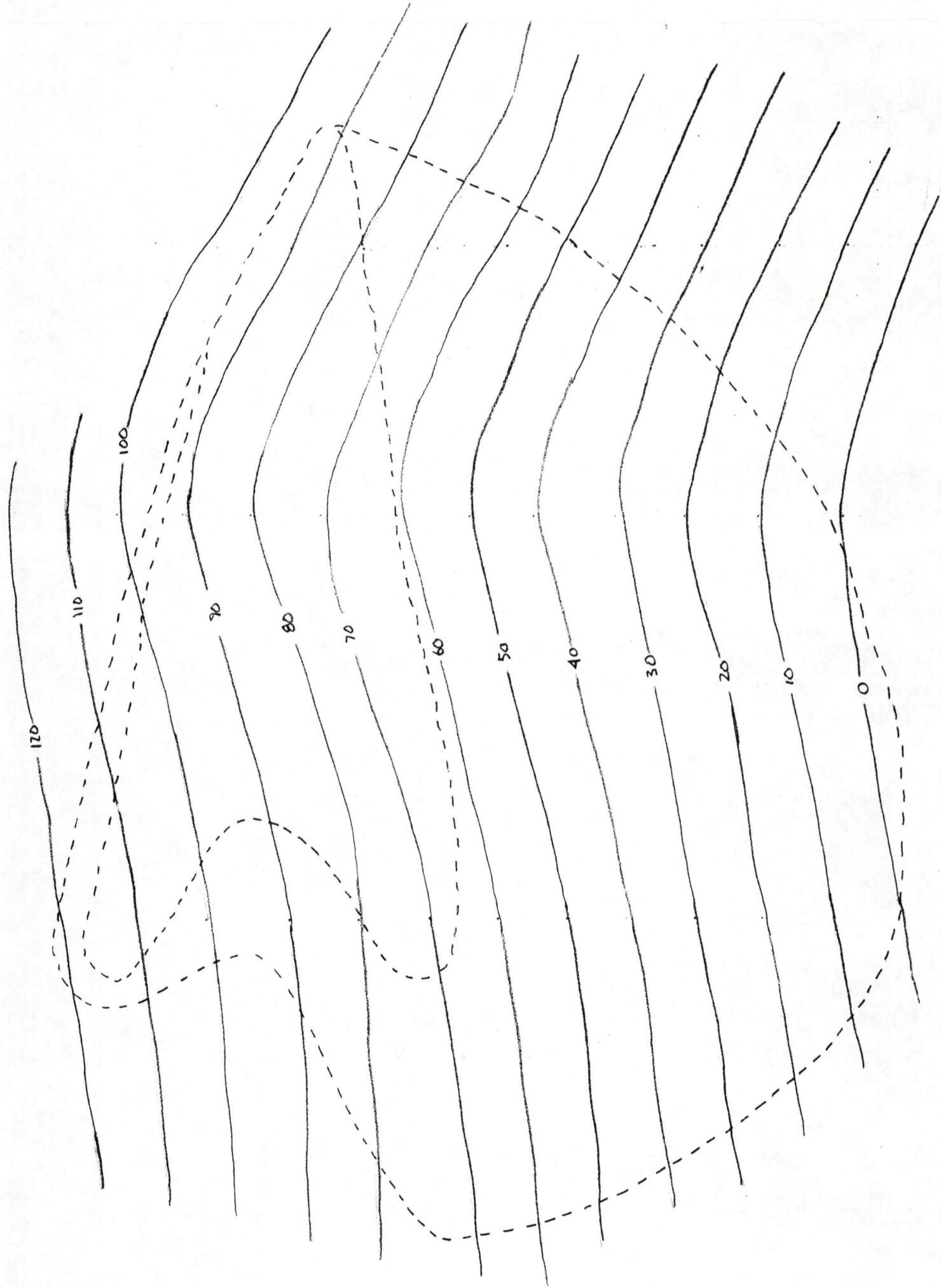
NORTH STAR

SCALE: 1" = 40'

DRAWN BY: PAUL SPOR

DATA: 2/17/92

1.3 ACRE



NORTH LILY MINING COMPANY

UPPER MAMMOTH DUMP

POST RECLAMATION CONTOUR

SCALE: 1" = 40'

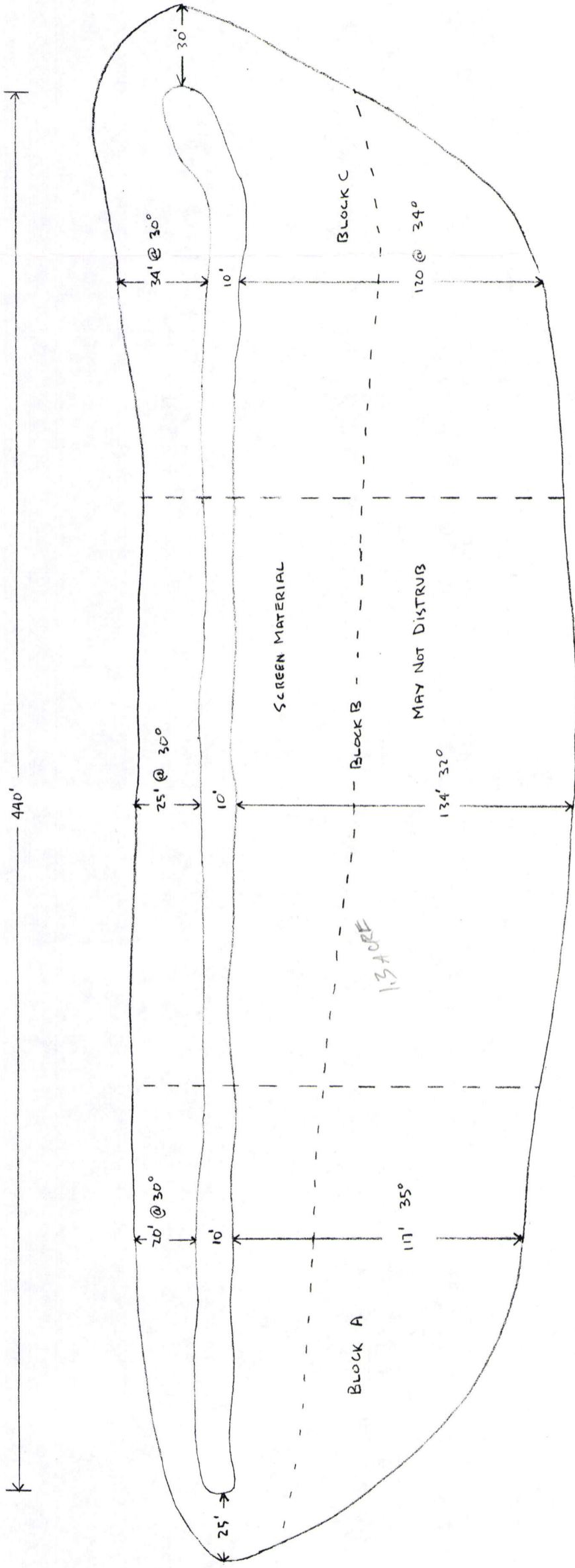
DRAWN BY: PAUL SPOR

DATE: 3/10/92

2.5 ACRE

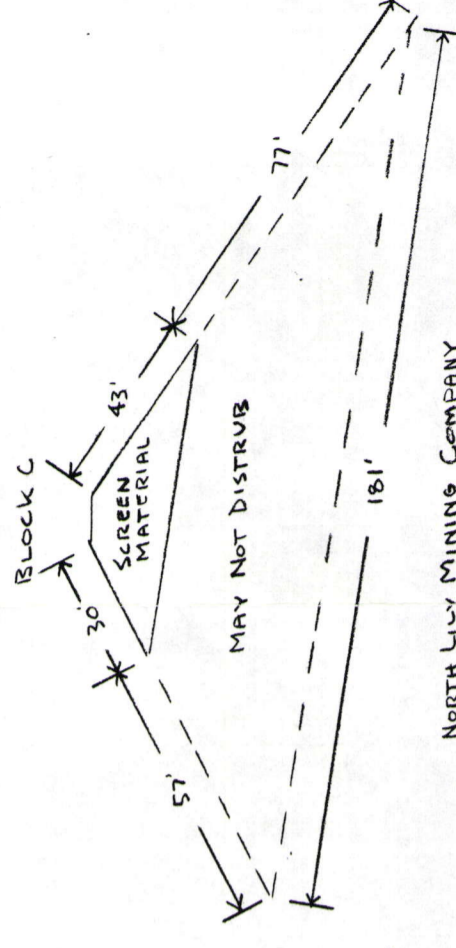
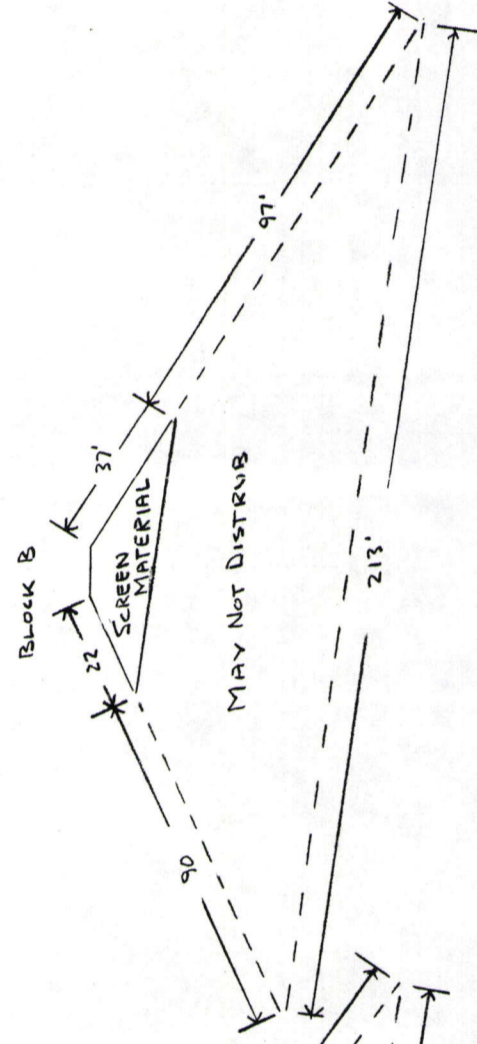
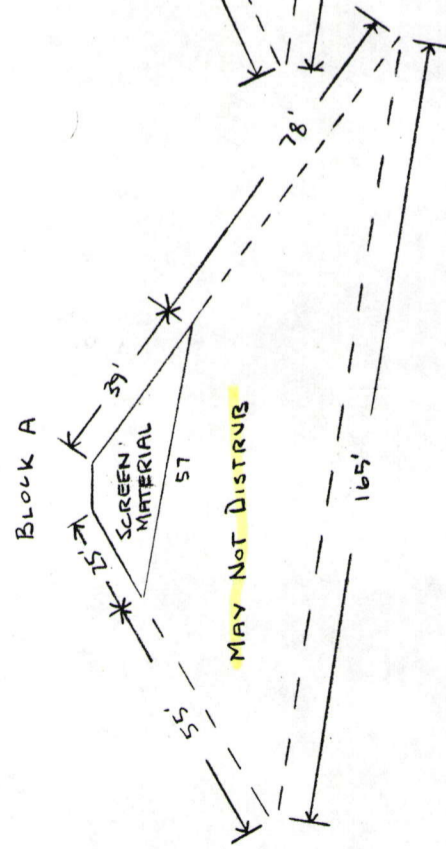
APPENDIX MAP B-5





AVERAGE SLOPE OF HILLSIDE 8° (NATURAL GROUND)

8°



NORTH LULY MINING COMPANY  
EUREKA HILL RAILROAD GRADE

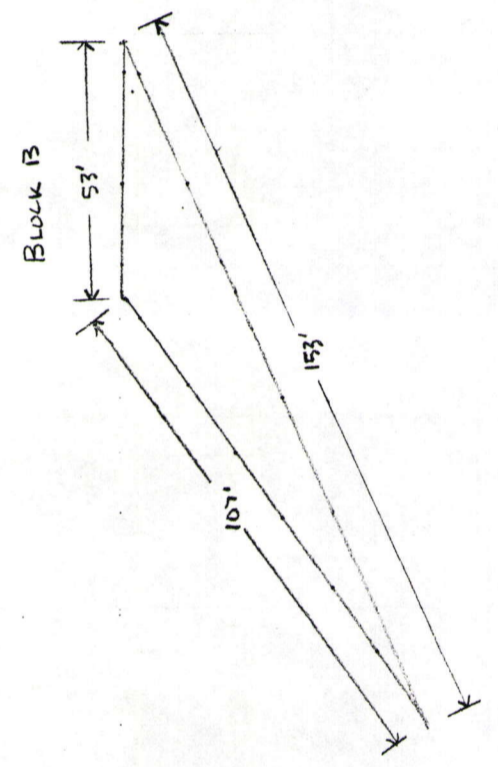
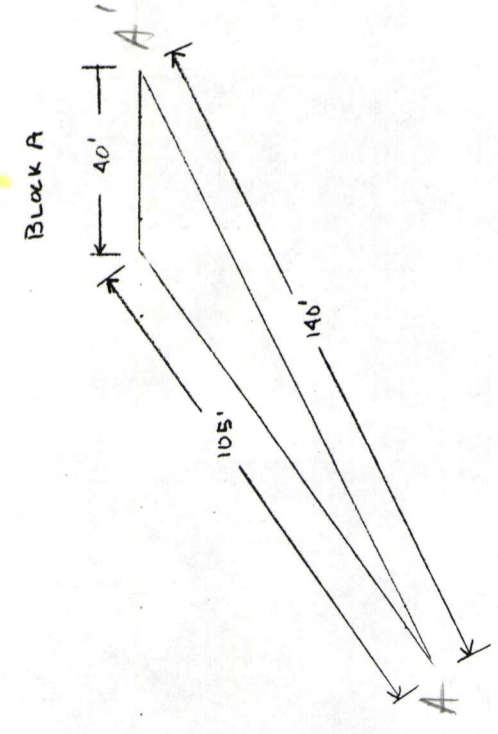
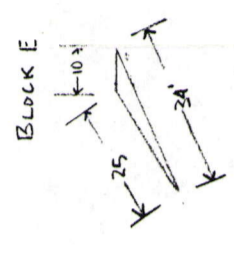
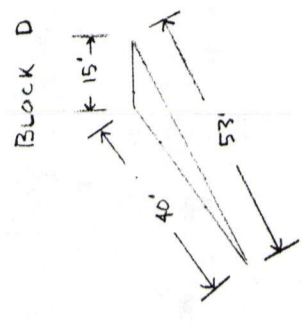
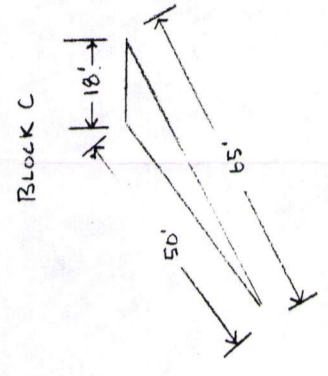
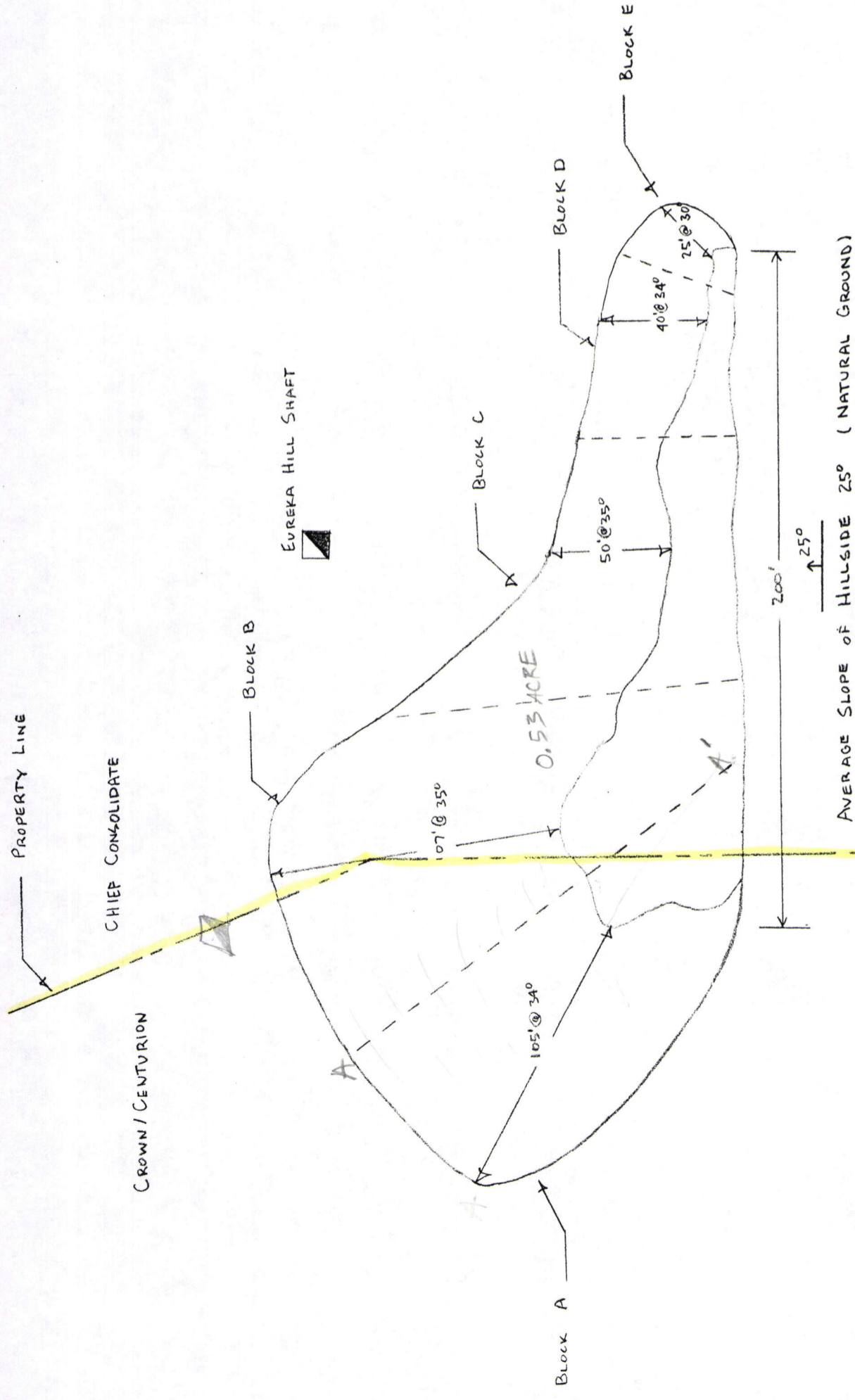
SCALE: 1" = 40'

DRAWN BY: PAUL SPOR

DATE: 2/14/92

? ACRES

APPENDIX MAP B-3



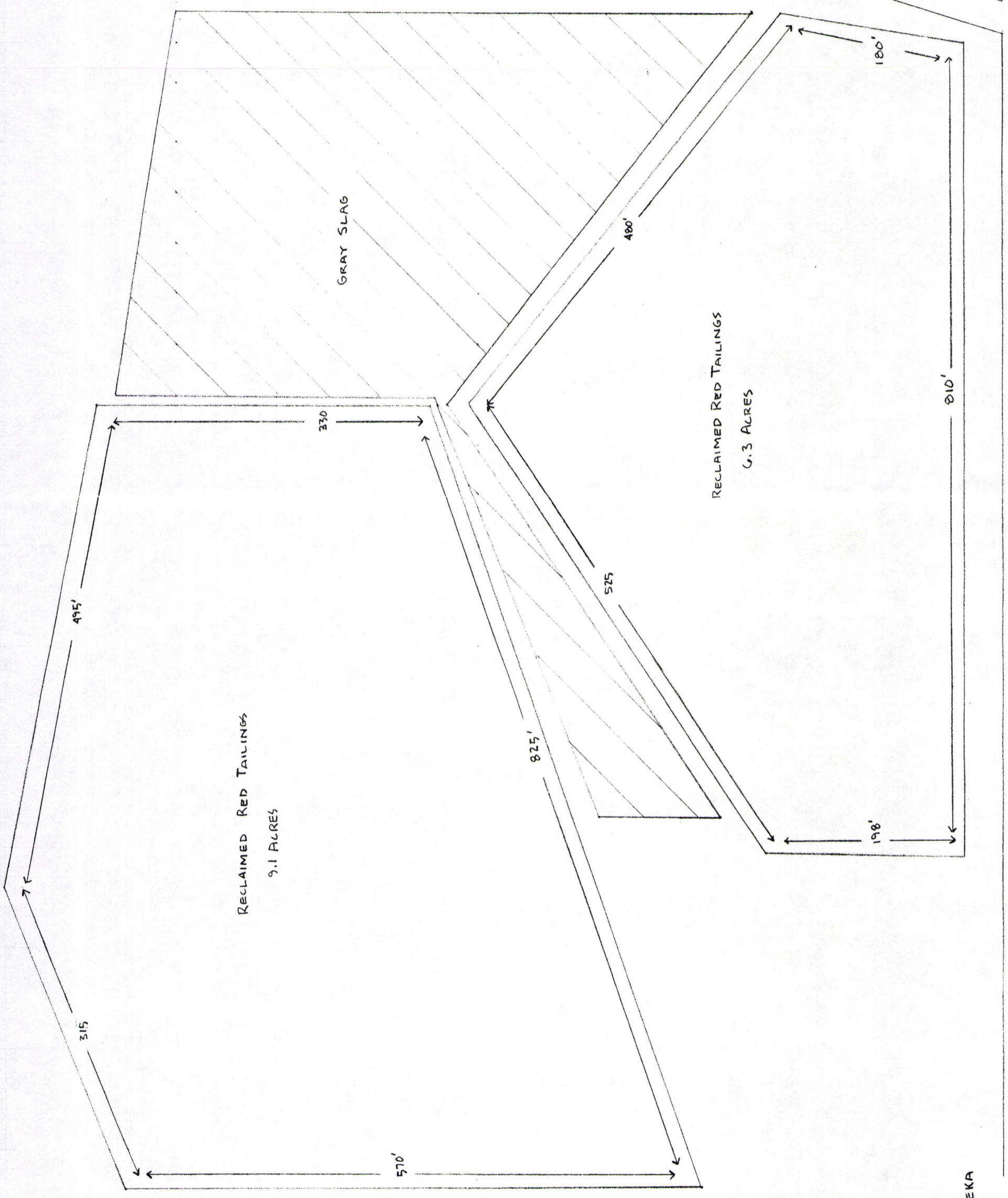
NORTH LILY MINING COMPANY  
 UPPER EUREKA HILL DUMP  
 SCALE: 1" = 40'  
 DRAWN BY: PAUL SPOR  
 DATE: 2/13/92  
 2.2 ACRE  
 4.4

APPENDIX MAP B-1



NORTH LILY MINING COMPANY  
AS BUILT RECLAIMED RED TAILINGS  
SCALE 1" = 100'  
DRAWN BY: PAUL SPOR  
DATE: 3/19/92

APPENDIX MAP C-3

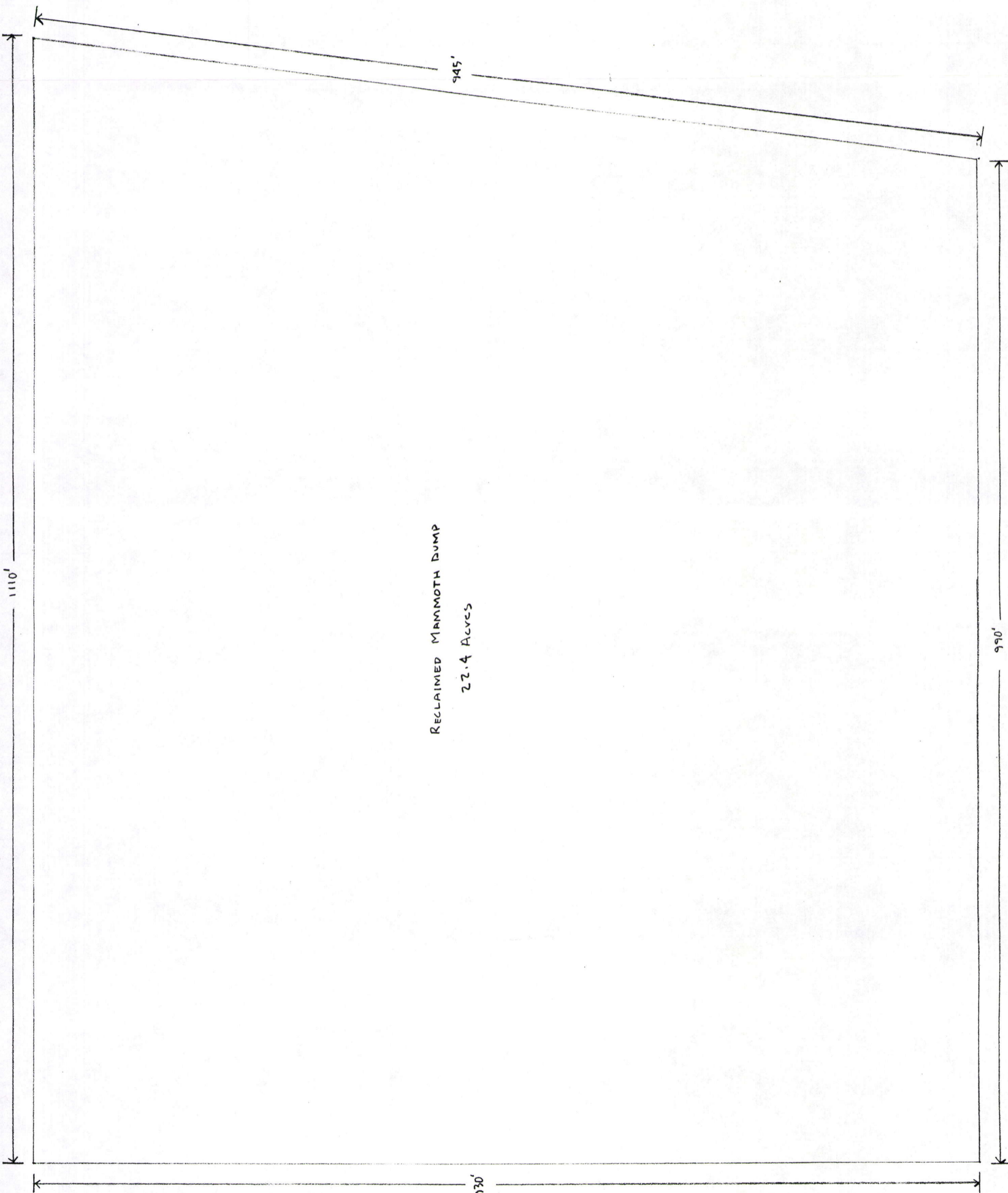


To EUREKA

TO SILVER PASS

TO DELTA

HIGHWAY 6

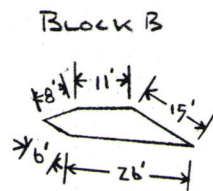
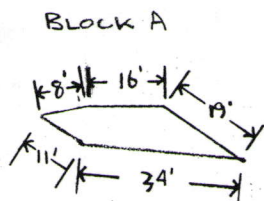
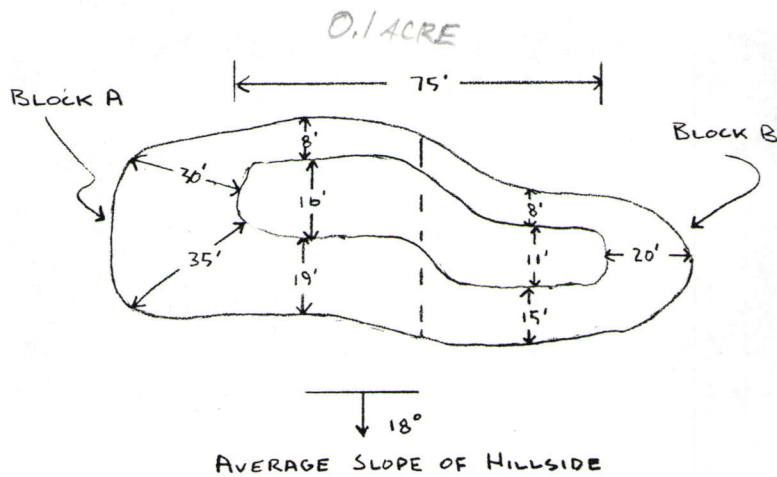


RECLAIMED MAMMOTH DUMP  
22.4 Acres

July 10, 1992  
No. 100  
AGREE, with?

NORTH LILY MINING COMPANY  
AS BUILT RECLAIMED MAMMOTH  
SCALE: 1" = 100'  
DRAWN BY: PAUL SPOR  
DATE: 3/19/92

APPENDIX MAP C-2



NORTH LILY MINING COMPANY

EONS DUMP

SCALE: 1" = 40'

DRAWN BY: PAUL SPOR

DATE: 2/17/92

0.5 ACRE

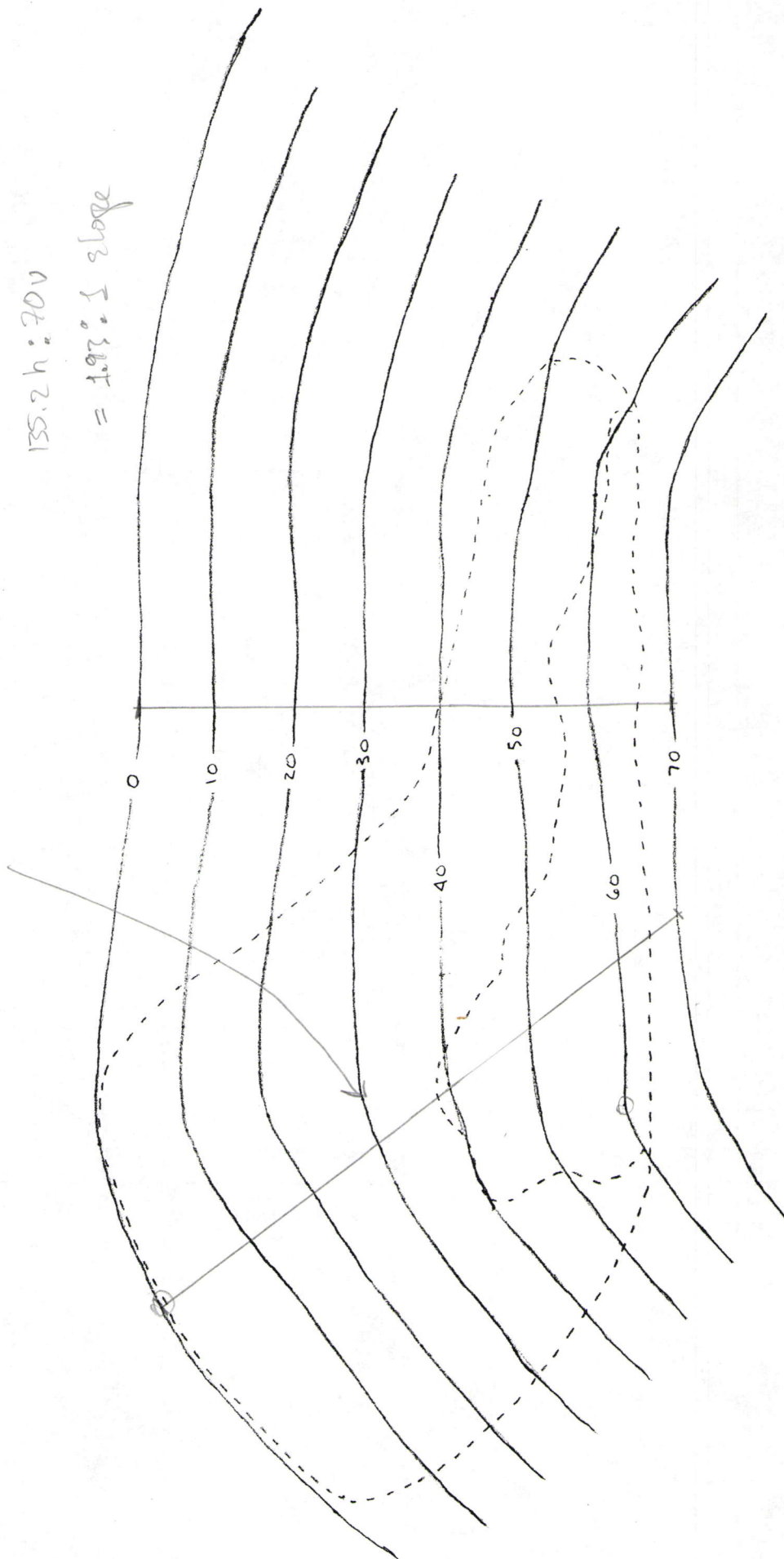
APPENDIX B-8

$$3.94 \times 40 = 157.60 \text{ h} : 70 \text{ v}$$

$$= 2.25 : 1 \text{ slope}$$

$$135.2 \text{ h} : 70 \text{ v}$$

$$= 1.93 : 1 \text{ slope}$$



2.2 ACRES

NORTH LILY MINING COMPANY

UPPER EUREKA HILL

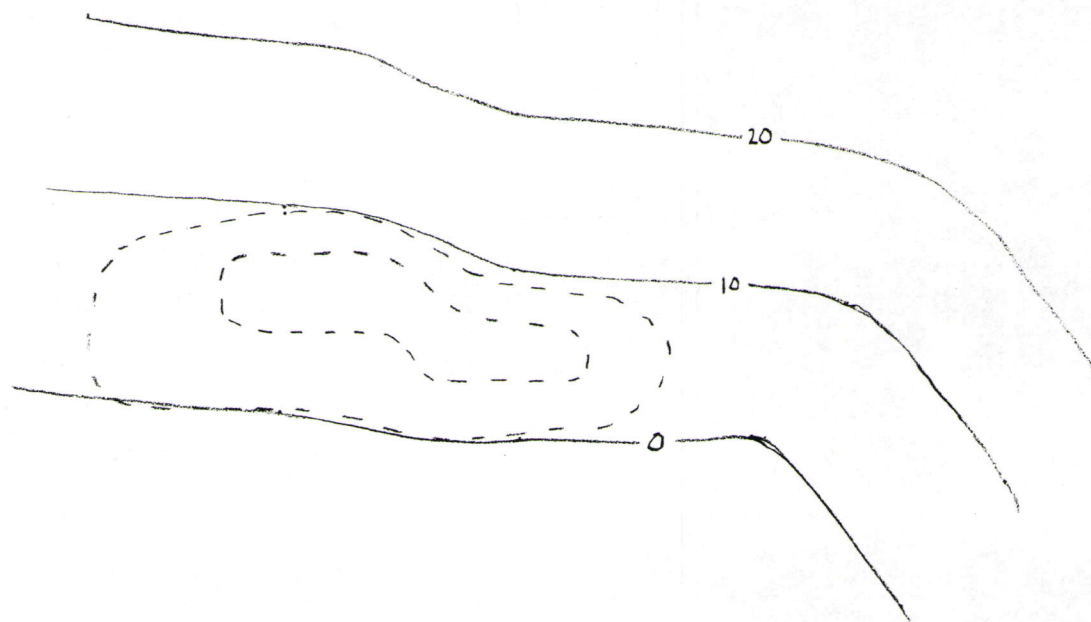
POST RECLAMATION CONTOUR

SCALE: 1" = 40'

DRAWN BY: PAUL SPOR

DATE: 2/18/92

APPENDIX MAP B-2



NORTH LILY MINING COMPANY

EONS DUMP

POST RECLAMATION CONTOUR MAP

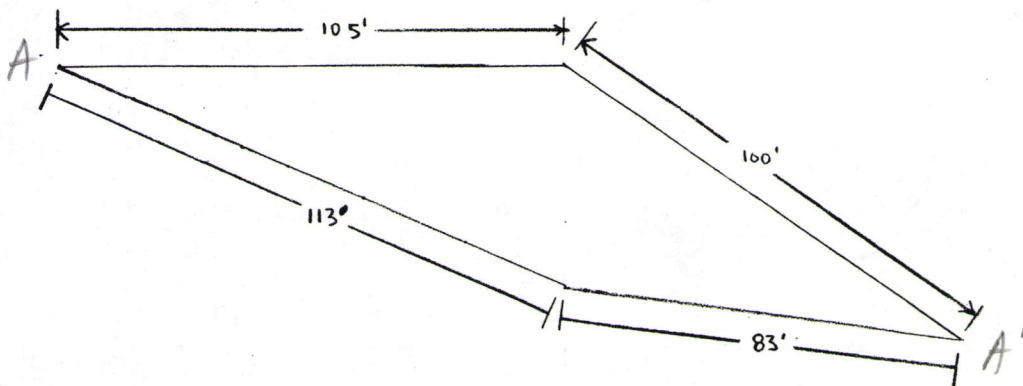
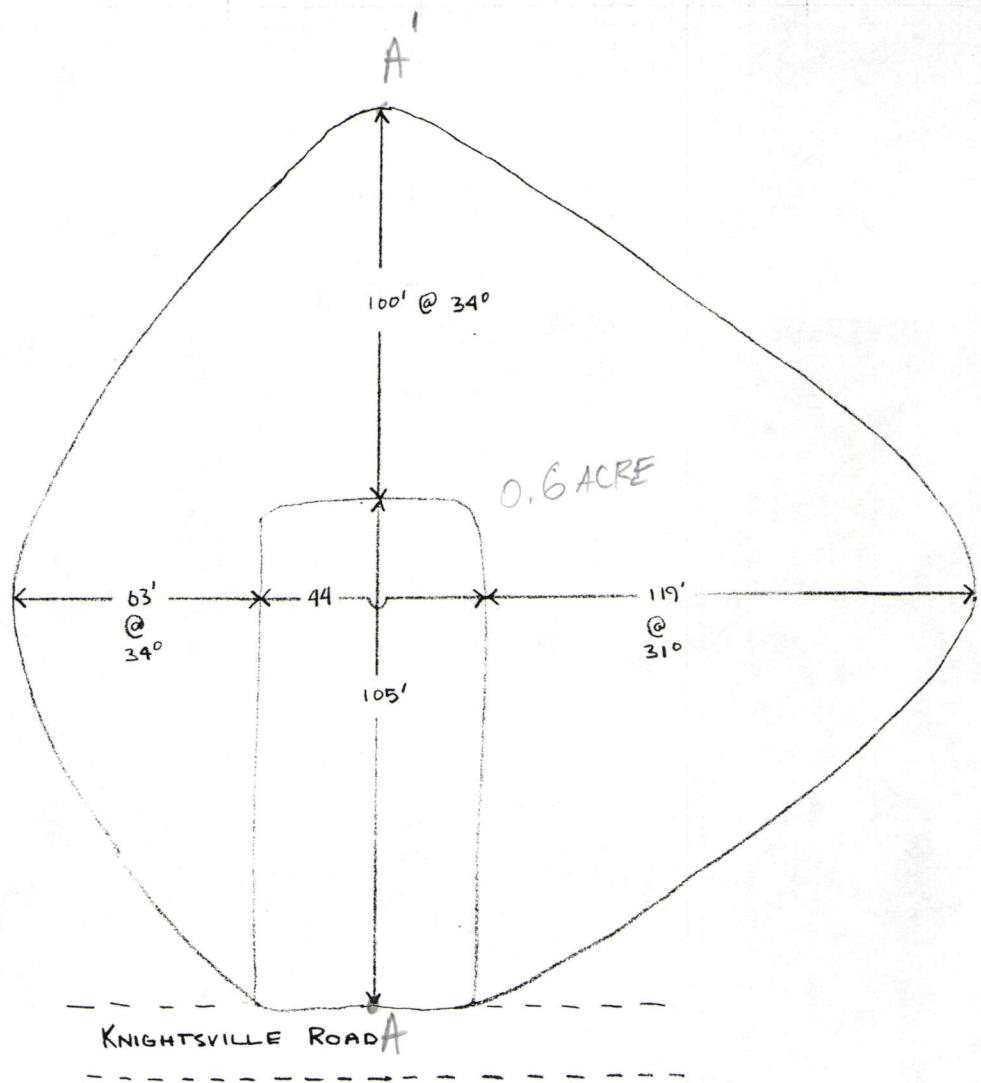
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DRAWN BY: PAUL SPOR

DATE: 3/11/92

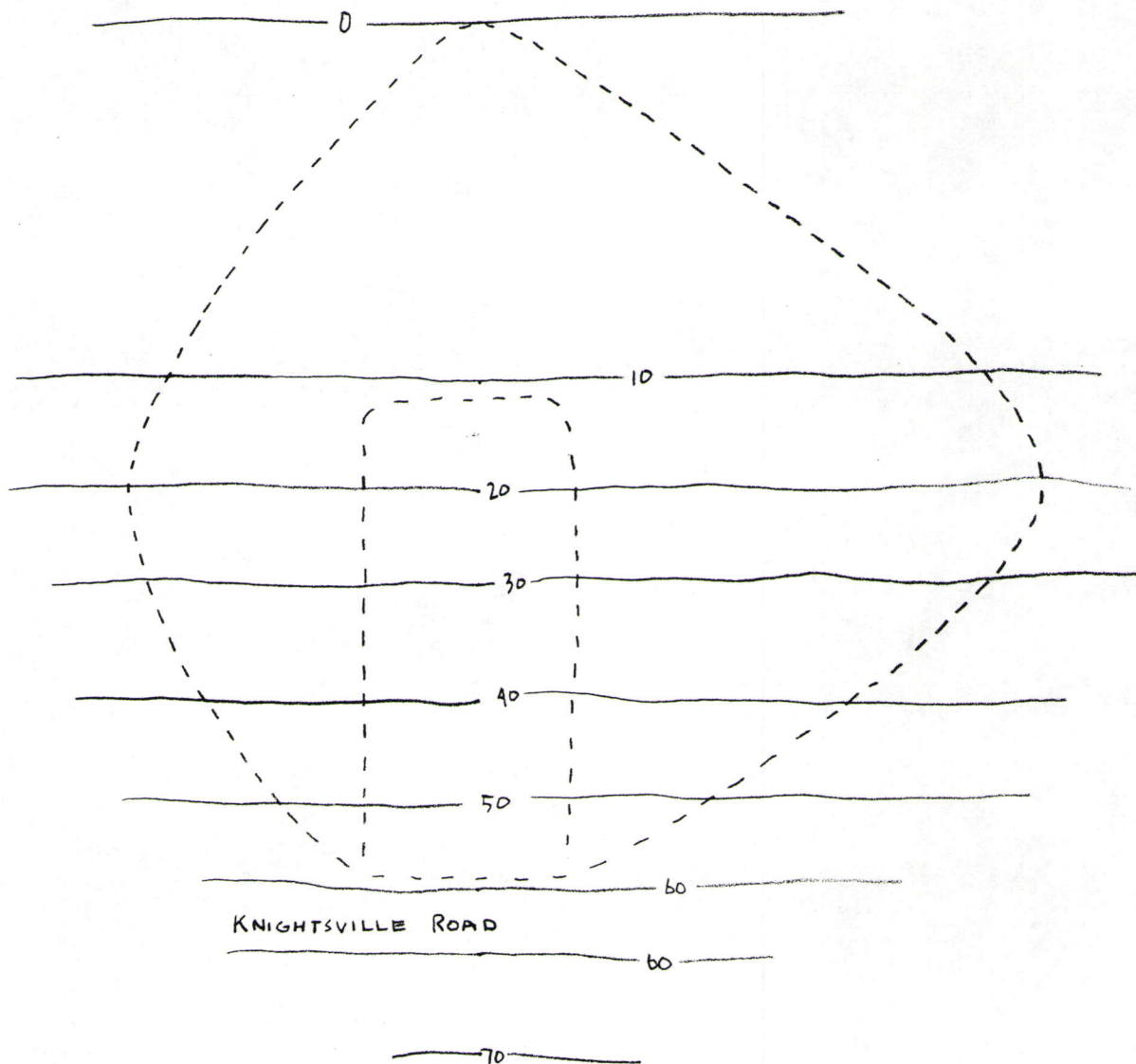
0.5 ACRE

APPENDIX B-9



NORTH LILY MINING COMPANY  
 COLORADO #1 DUMP  
 SCALE: 1" = 40'  
 DRAWN BY: PAUL SPOR  
 DATE: 3/11/92

0.8 ACRE



NORTH LILY MINING COMPANY

COLORADO #1 DUMP

POST RECLAMATION CONTOUR MAP

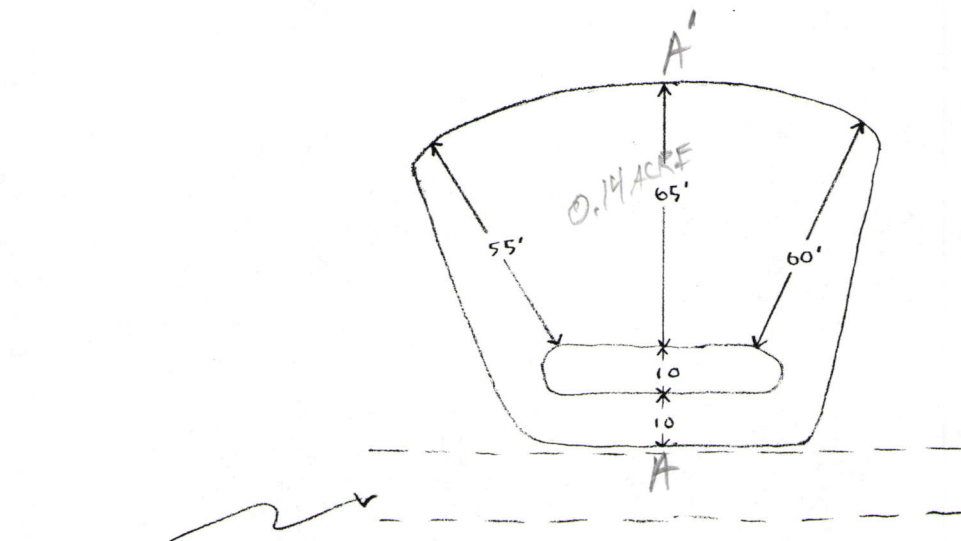
SCALE : 1" = 40'

DRAWN BY: PAUL SPOR

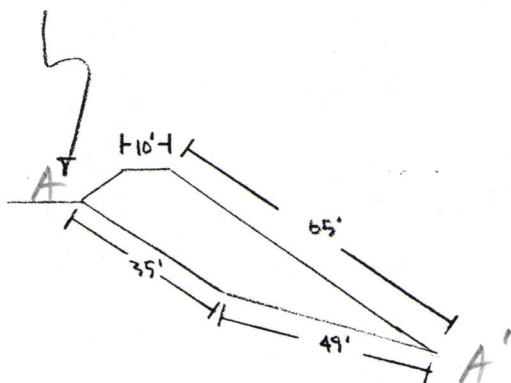
DATE : 3/11/92

0.8 ACRE

APPENDIX MAP B-13



KNIGHTSVILLE ROAD



NORTH LILY MINING COMPANY

COLORADA #2 DUMP

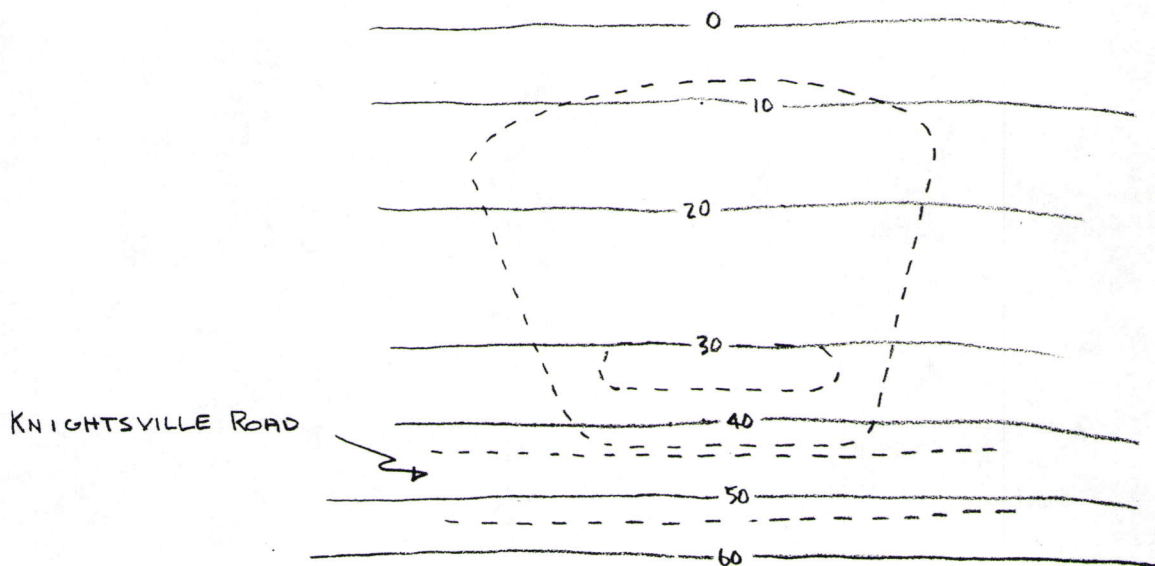
SCALE: 1" = 40'

DRAWN BY: PAUL SPOR

DATE: 3/11/92

0.9 ACRE

APPENDIX MAP B-14



NORTH LILY MINING COMPANY

COLORADO # 2 DUMP

POST RECLAMATION CONTOUR MAP

SCALE: 1" = 40'

DRAWN BY: PAUL SPOR

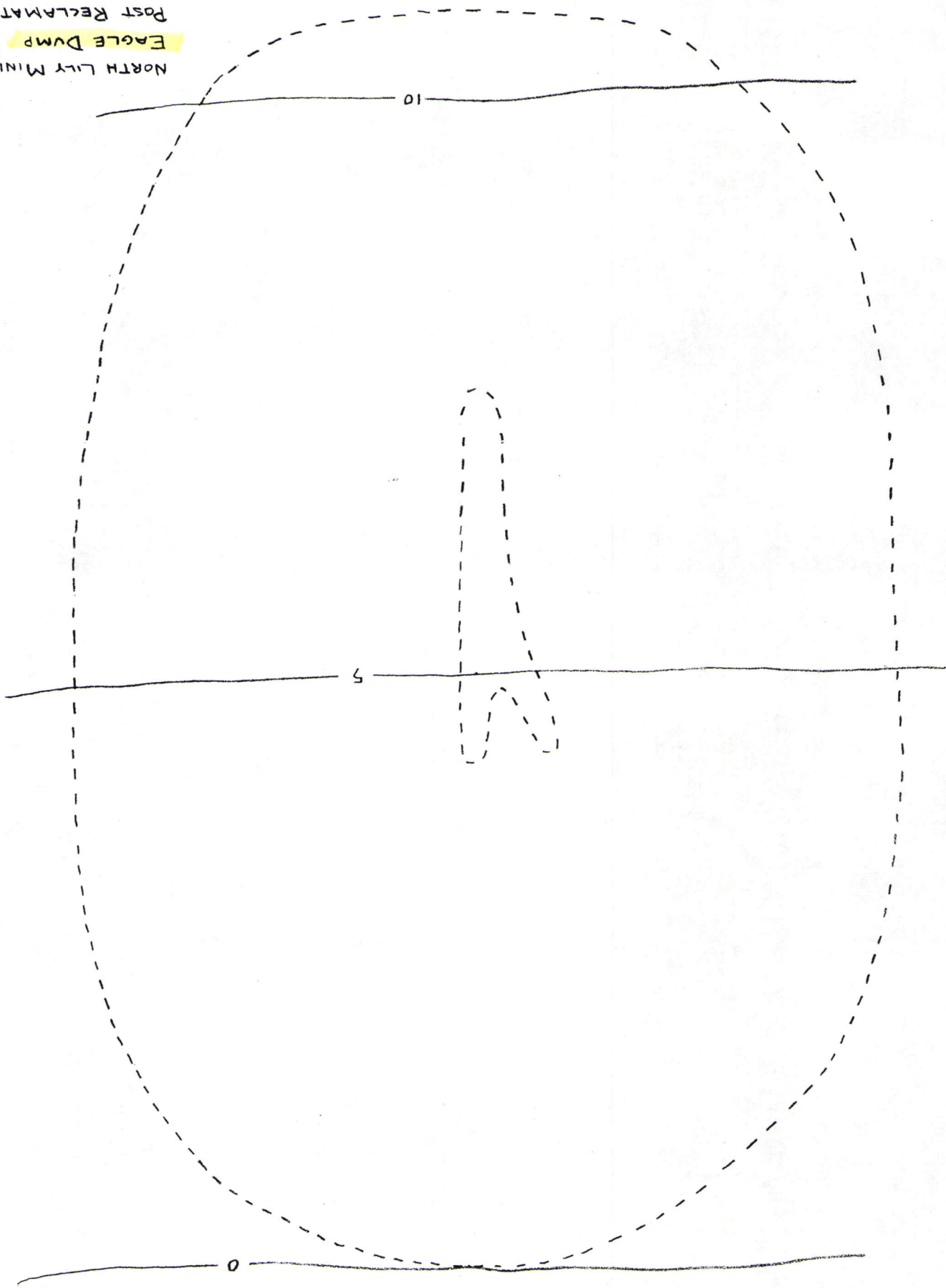
DATE: 3/11/92

0.9 ACRE

APPENDIX MAP B-15

APPENDIX MAP B-17  
DATE: 3/11/92  
DRAWN BY: PAUL SPOR  
SCALE: 1" = 60'  
Post RECLAMATION CONTOUR  
EAGLE DUMP  
NORTH LEE MINING COMPANY

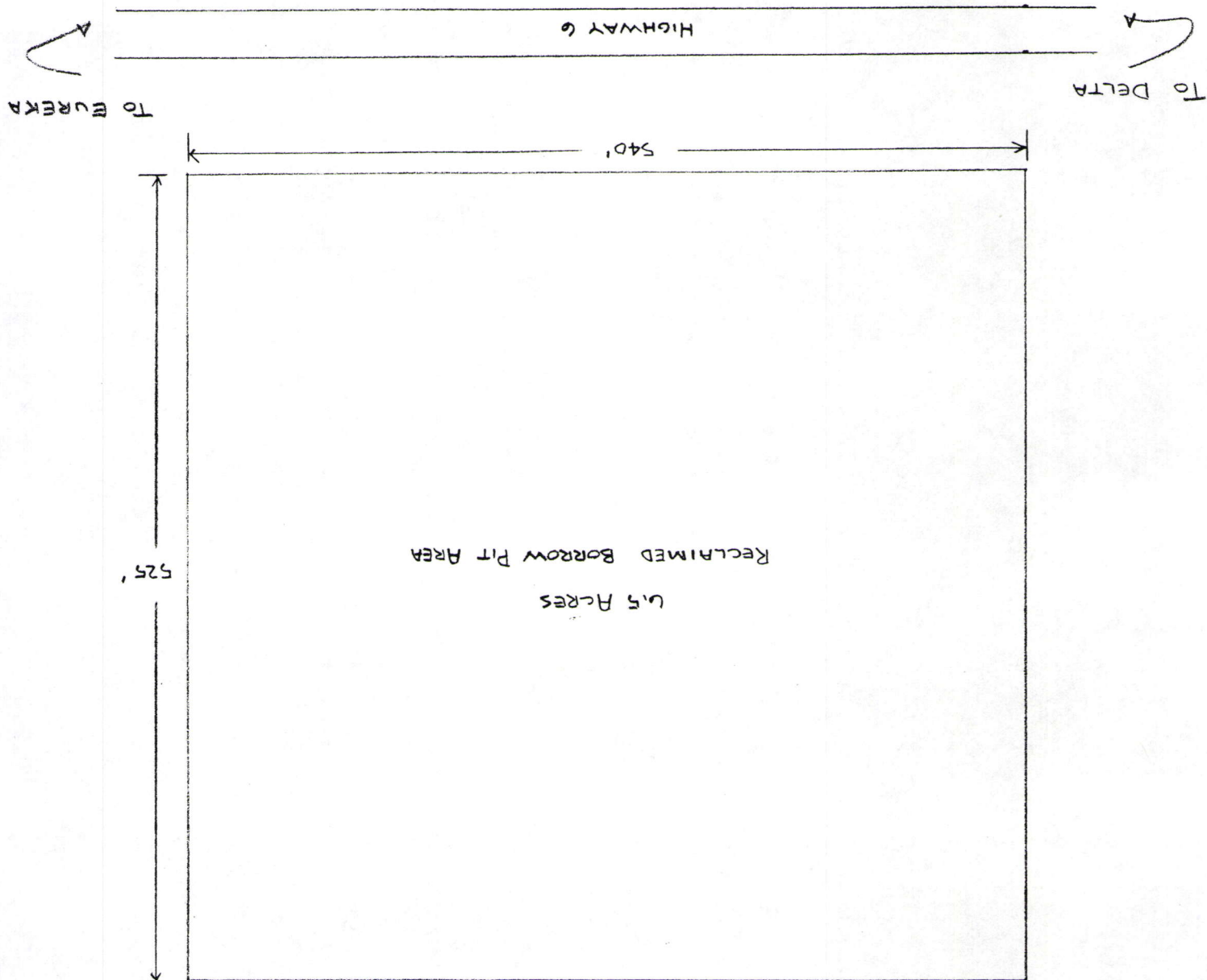
3.4 ACRES



**APPENDIX C INDEX OF MAPS**

<b>APPENDIX C-1</b>	As built Reclaimed Borrow Pit Area
<b>APPENDIX C-2</b>	As Built Reclaimed Mammoth Dump
<b>APPENDIX C-3</b>	As Built Reclaimed Red Tailings

NORTH LILY MINING COMPANY  
AS BUILT BORROW PIT AREA  
SCALE 1" = 100'  
DRAWN BY: PAUL SPOR  
DATE: 3/19/92



This page is a reference page used to track documents internally for the Division of Oil, Gas and Mining

Mine Permit Number 10230007 Mine Name Tintic Project  
Operator North City Date March 23, 1992  
TO \_\_\_\_\_ FROM \_\_\_\_\_

☐ CONFIDENTIAL ☐ BOND CLOSURE ☐ LARGE MAPS ☒ EXPANDABLE  
☐ MULTIPLE DOCUMENT TRACKING SHEET ☐ NEW APPROVED NOI  
☐ AMENDMENT ☐ OTHER \_\_\_\_\_

Description YEAR-Record Number

☐ NOI ☒ Incoming ☐ Outgoing ☐ Internal ☐ Superseded

Permit Revision

☐ NOI ☐ Incoming ☐ Outgoing ☐ Internal ☐ Superseded

☐ NOI ☐ Incoming ☐ Outgoing ☐ Internal ☐ Superseded

☐ NOI ☐ Incoming ☐ Outgoing ☐ Internal ☐ Superseded

☐ TEXT/ 8 1/2 X 11 MAP PAGES ☐ 11 X 17 MAPS ☐ LARGE MAP

COMMENTS: \_\_\_\_\_

CC: \_\_\_\_\_